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COLOR MONITOR **SERVICE MANUAL**

CHASSIS NO. : CA-124

FACTORY MODEL: FB770H

MODEL: FLATRON F700B (FB770H-EL)

*() ID LABEL Model No.

CAUTION

BEFORE SERVICING THE UNIT,
READ THE **SAFETY PRECAUTIONS** IN THIS MANUAL.



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SPECIFICATIONS

1. PICTURE TUBE

Size	: 17 inch
Deflection Angle	: 90°
Neck Diameter	: 29.1 mm
Stripe Pitch	: 0.24 mm
Face Treatment	: W-ARASC (Anti-Reflection and Anti-Static Coating)
Internal	: Anti-Glare

2. SIGNAL

- 2-1. Horizontal & Vertical Sync
- 1) Input Voltage Level: Low=0~1.2V, High=2.5~5.5V
 - 2) Sync Polarity : Positive or Negative
- 2-2. Video Input Signal
- 1) Voltage Level : 0 ~ 0.7 Vp-p
 - a) Color 0, 0 : 0 Vp-p
 - b) Color 7, 0 : 0.467 Vp-p
 - c) Color 15, 0 : 0.7 Vp-p
 - 2) Input Impedance : 75 Ω
 - 3) Video Color : R, G, B Analog
 - 4) Signal Format : Refer to the Timing Chart
- 2-3. Signal Connector
- 3 row 15-pin Connector (Attached)
- 2-4. Scanning Frequency
- | | |
|------------|---------------|
| Horizontal | : 30 ~ 70 kHz |
| Vertical | : 50 ~ 160 Hz |

3. POWER SUPPLY

- 3-1. Power Range
- AC 110~220V (Free Voltage), 60Hz, 2.0A Max.

3-2. Power Consumption

MODE	POWER CONSUMPTION	LED COLOR
NORMAL (ON)	73 W	GREEN
STAND-BY	less than 15 W	AMBER
SUSPEND	less than 15 W	
OFF	less than 5 W	AMBER

4. DISPLAY AREA

- 4-1. Active Video Area :
- Max Image Size - 325.4 x 244.1 mm (12.81" x 9.61")
 - Preset Image Size - 310 x 230 mm (12.20" x 9.06")
- 4-2. Display Color : Full Colors
- 4-3. Display Resolution : 1280 x 1024 / 60Hz(Max)
(Non-Interlace)
- 4-4. Video Bandwidth : 110 MHz

5. ENVIRONMENT

- 5-1. Operating Temperature: 0°C ~ 40°C
(Ambient)
- 5-2. Relative Humidity : 10%~ 90%
(Non-condensing)
- 5-3. Altitude : 5,000 m

6. DIMENSIONS (with TILT/SWIVEL)


Width	: 415 mm (16.34 inch)
Depth	: 432 mm (17.00 inch)
Height	: 413 mm (16.25 inch)

7. WEIGHT (with TILT/SWIVEL)

Net Weight	: 17.0 kg (37.48 lbs.)
Gross Weight	: 19.5 kg (42.99 lbs.)

SAFETY PRECAUTIONS

SAFETY-RELATED COMPONENT WARNING!

There are special components used in this color monitor which are important for safety. ***These parts are marked  on the schematic diagram and the replacement parts list.*** It is essential that these critical parts should be replaced with the manufacturer's specified parts to prevent X-radiation, shock, fire, or other hazards. Do not modify the original design without obtaining written permission from manufacturer or you will void the original parts and labor guarantee.

CAUTION: No modification of any circuit should be attempted.

Service work should be performed only after you are thoroughly familiar with all of the following safety checks and servicing guidelines.

SAFETY CHECK

Care should be taken while servicing this color monitor because of the high voltage used in the deflection circuits. These voltages are exposed in such areas as the associated flyback and yoke circuits.

FIRE & SHOCK HAZARD

An isolation transformer must be inserted between the color monitor and AC power line before servicing the chassis.

- In servicing, attention must be paid to the original lead dress specially in the high voltage circuit. If a short circuit is found, replace all parts which have been overheated as a result of the short circuit.
- All the protective devices must be reinstalled per the original design.
- Soldering must be inspected for the cold solder joints, frayed leads, damaged insulation, solder splashes, or the sharp points. Be sure to remove all foreign materials.

IMPLOSION PROTECTION

All used display tubes are equipped with an integral implosion protection system, but care should be taken to avoid damage and scratching during installation. Use only same type display tubes.

X-RADIATION

The only potential source of X-radiation is the picture tube. However, when the high voltage circuitry is operating properly there is no possibility of an X-radiation problem. The basic precaution which must be exercised is keep the high voltage at the factory recommended level; the normal high voltage is about 25.8kV. The following steps describe how to measure the high voltage and how to prevent X-radiation.

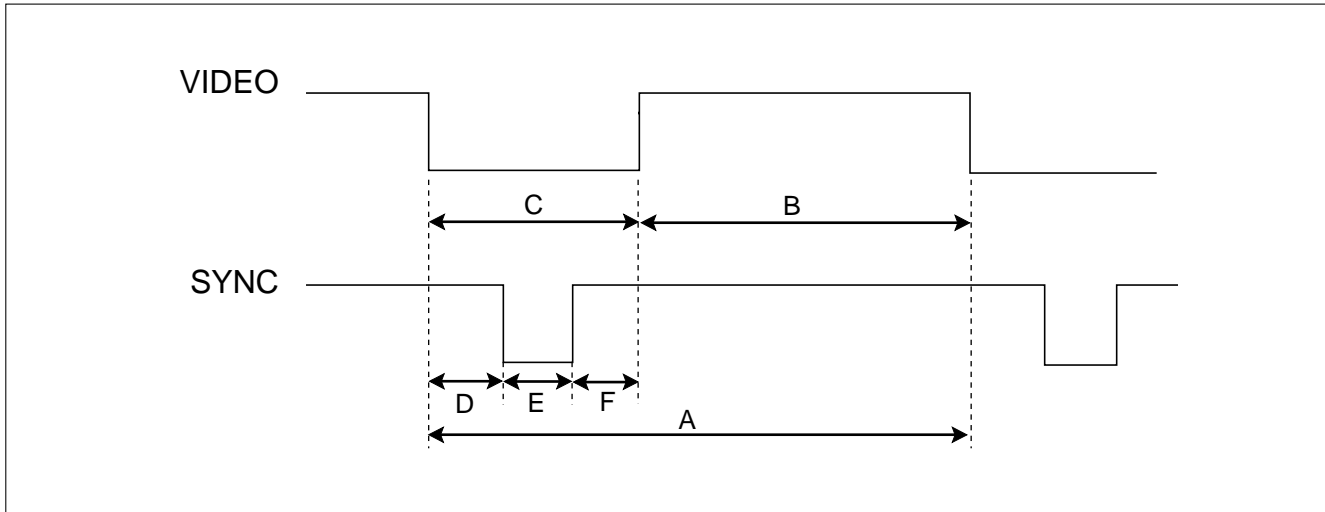
Note : It is important to use an accurate high voltage meter calibrated periodically.

- To measure the high voltage, use a high impedance high voltage meter, connect (–) to chassis and (+) to the CDT anode cap.
- Set the brightness control to maximum point at full white pattern.
- Measure the high voltage. The high voltage meter should be indicated at the factory recommended level.
- If the meter indication exceeds the maximum level, immediate service is required to prevent the possibility of premature component failure.
- To prevent X-radiation possibility, it is essential to use the specified picture tube.

CAUTION:

Please use only a plastic screwdriver to protect yourself from shock hazard during service operation.

TIMING CHART



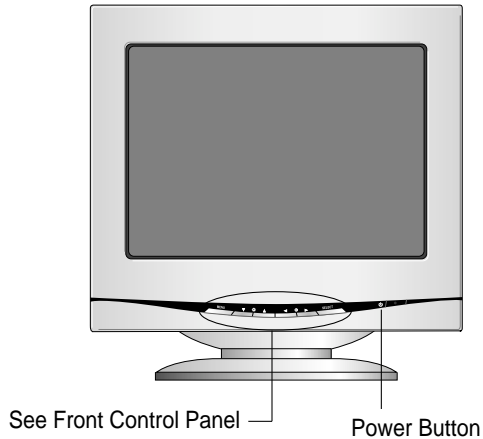
<< Dot Clock (MHz), Horizontal Frequency (kHz), Vertical Frequency (Hz), Horizontal etc... (μs), Vertical etc... (ms) >>

Mode	H/V Sort	Sync Polarity	Frequency	Total Period (A)	Video Active Time (B)	Blanking Time (C)	Sync Duration (E)	Back Porch (F)	Front Porch (D)	Resolution
1	H	—	37.50	26.67	20.32	6.35	2.03	3.81	0.51	640x480 75Hz
	V	—	74.99	13.335	12.802	0.533	0.080	0.427	0.026	
2	H	+	46.88	21.33	16.16	5.17	1.62	3.23	0.32	800x600 75Hz
	V	+	75.01	13.331	12.798	0.533	0.064	0.448	0.021	
3	H	+	53.68	18.63	14.22	4.41	1.14	2.70	0.57	800x600 85Hz
	V	+	85.07	11.755	11.178	0.577	0.056	0.503	0.018	
4	H	+	68.677	14.561	10.836	3.725	1.016	2.201	0.508	1024x768 85Hz
	V	+	85.00	11.764	11.182	0.582	0.044	0.524	0.014	

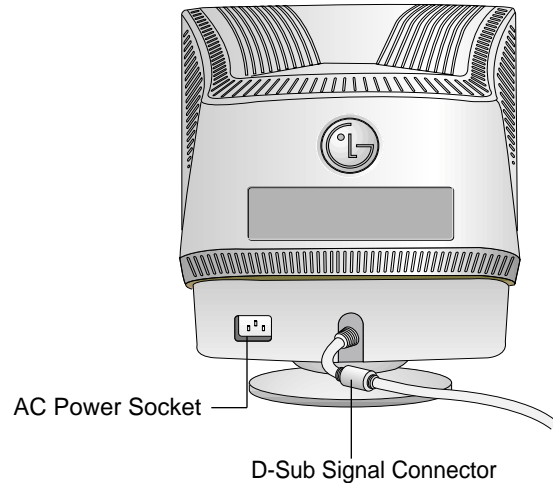
* Mode 1~Mode 4: Basic Mode

OPERATING INSTRUCTIONS

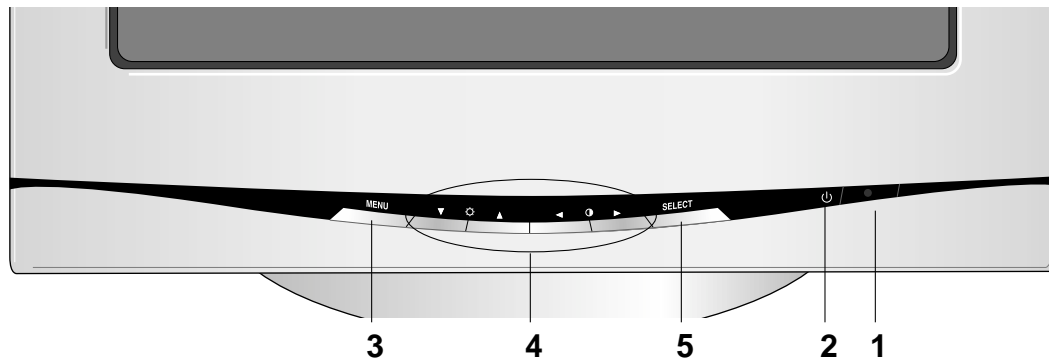
FRONT VIEW



REAR VIEW



Front Control Panel



1. Power Button

This button is used to turn the monitor ON and OFF.

2. Power Indicator

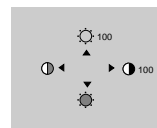
This Indicator lights up green when the monitor operates normally. If the monitor is in DPM (Energy Saving) mode, this indicator color changes to amber.

3. MENU (or OSD) Button

Use this button to enter or exit the on screen display.

4. ▲▼/◀▶ Button

Use these buttons to choose or adjust items in the on screen display.



▶ Button Bring up Contrast adjustment

▲ Button Bring up Brightness adjustment

The Contrast and Brightness functions are also available in the On Screen Display (OSD) menu.

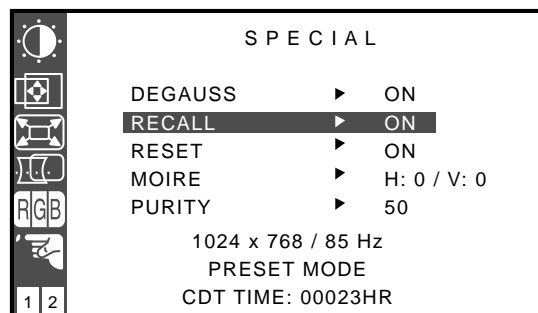
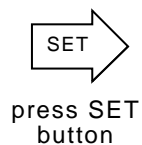
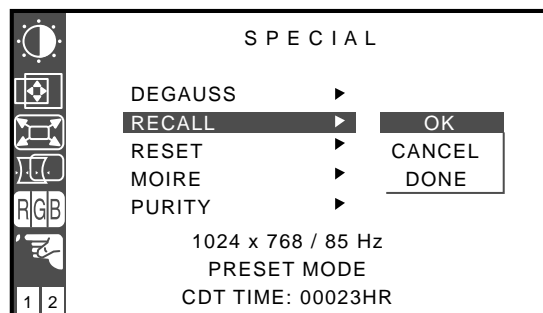
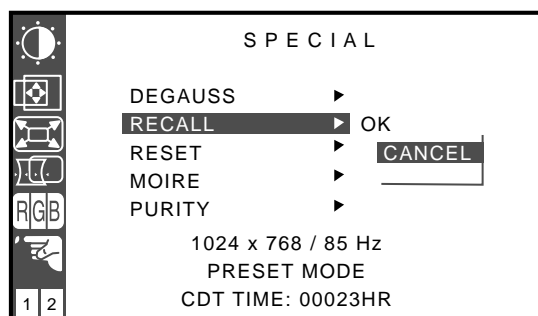
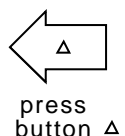
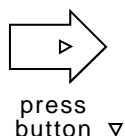
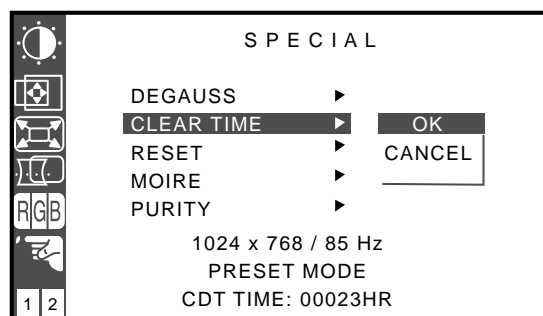
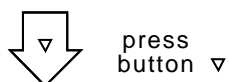
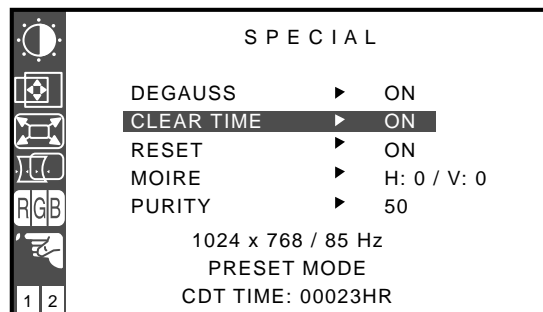
5. SELECT (or SET) Button

Use this button to enter a selection in the on screen display.

OSD New Function

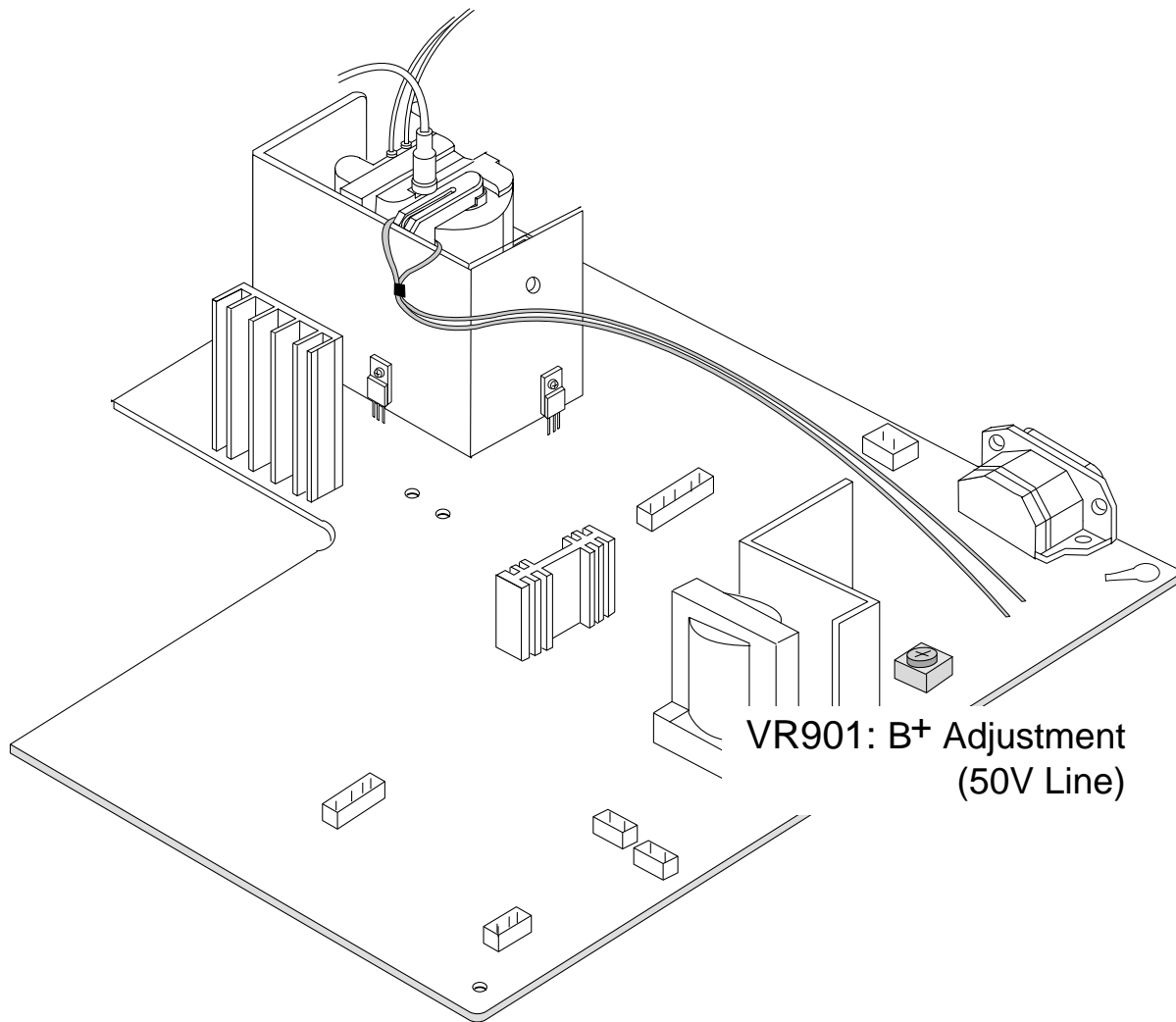
Clear Time Menu

On Clear Time Menu, Right Triangle button when button is pressed on the "Clear Time" menu, small window will be displayed on the right.
On the bottom of OSD, CDT Time is Displayed.

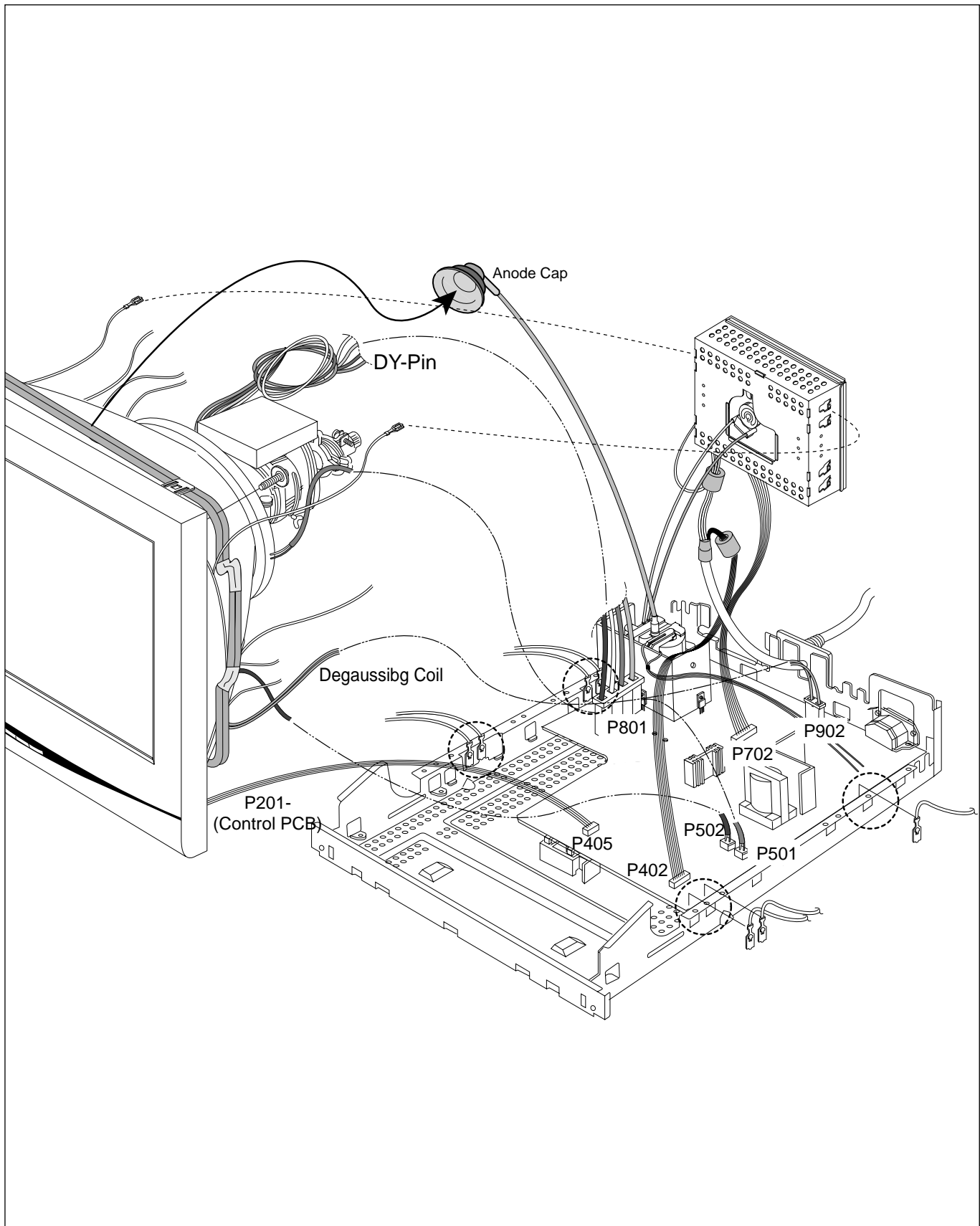


Done Message Display

CONTROL LOCATIONS



WIRING DIAGRAM



DISASSEMBLY

1. TILT/SWIVEL & BACK COVER REMOVAL

- 1) Set the monitor face downward.
- 2) Carefully remove the Tilt/Swivel by pulling it upward.
- 3) Remove the two screws (a).
- 4) Pressing the latch (b), Back cover by pushing it upward. (See Figure. 1)
- 4) Release the latch (c). (See Figure. 2 and Tip Spec.)
- 5) Slide the Back Cover away from the Front Cabinet of the monitor.

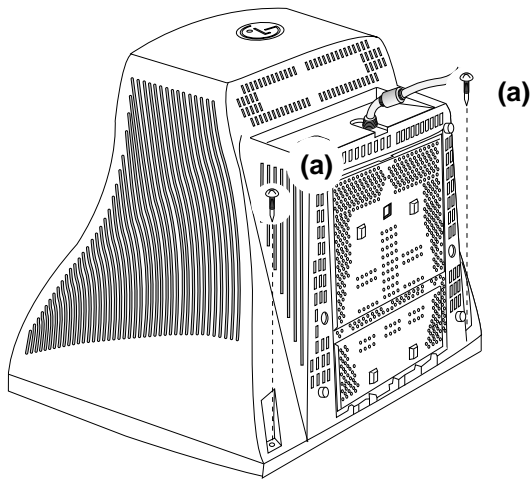


Figure.1

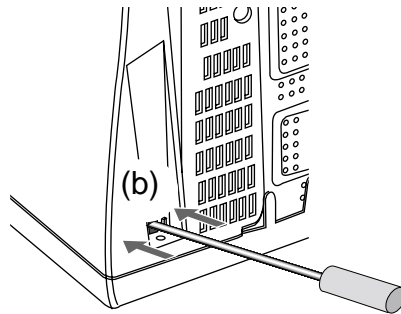
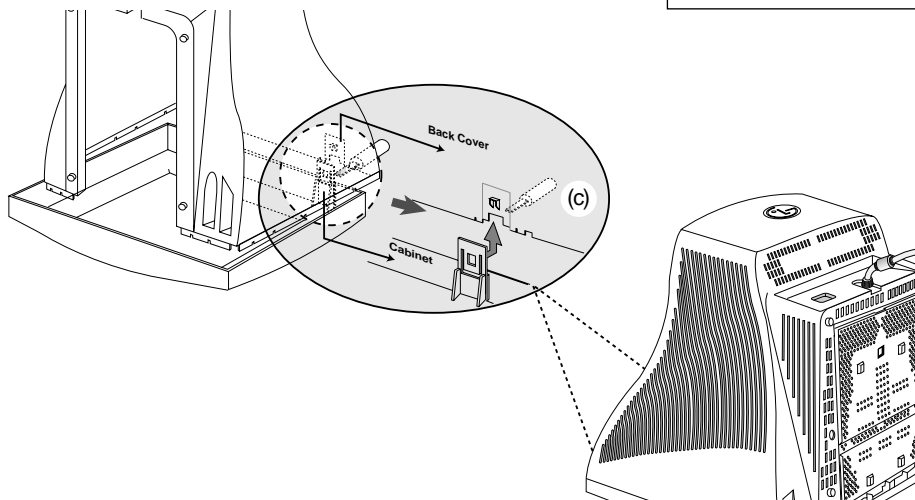


Figure.2

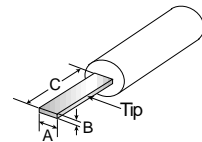


Tip Spec.

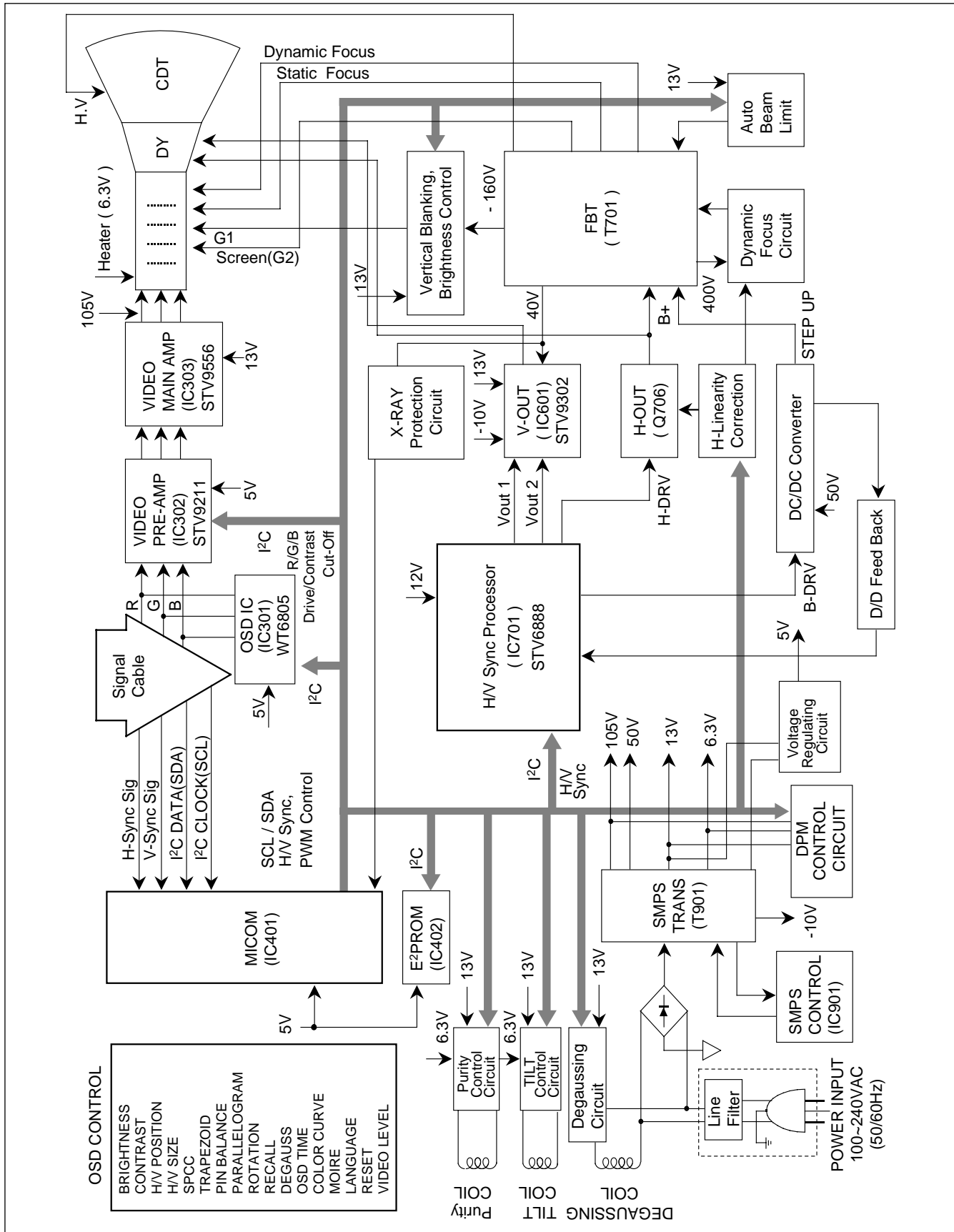
A(Width) : 5.0~15.0mm

B(Depth) : 0.6~0.9mm

C(Height) : 12.0mm



BLOCK DIAGRAM



DESCRIPTION OF BLOCK DIAGRAM

1. Line Filter & Associated Circuit.

This is used for suppressing noise of power input line flowing into the monitor and/or some noise generated in this monitor flowing out through the power input line.

That is to say, this circuit prevents interference between the monitor and other electric appliances.

2. Degauss Circuit & Coil.

The degauss circuit consists of the degaussing coil, the PTC(Positive Temperature Coefficient) thermistor(TH901), and the relay(RL901). This circuit eliminates abnormal color of the screen automatically by degaussing the shadow mask in the CRT during turning on the power switch. When you need to degauss in using the monitor, select DEGAUSS on the OSD menu.

3. SMPS(Switching Mode Power Supply).

This circuit is working of 90~264V AC(50/60Hz).

The operation procedure is as follows:

- 1) AC input voltage is rectified and smoothed by the bridge diodes (D900) and the capacitor (C908).
- 2) The rectified voltage(DC) is applied to the primary coil of the transformer(T901).
- 3) The control IC(IC901) generates switching pulse to turn on and off the primary coil of the transformer (T901) repeatedly.
- 4) Depending on turn ratio of the transformer, the secondary voltages appear at the secondary coils of the transformer(T901).
- 5) These secondary voltages are rectified by each diode(D941, D942, D951, D961, D971) and operate other circuit. (horizontal and vertical deflection, video amplifier, ...etc.)

4. X-ray Protection.

If the high voltage of the FBT reaches up to 29kV (abnormal state), IC401(MICOM) pin 35 Sensing from FBT directly. Then MICOM control IC701 (Deflection controller) to stop Horizontal drive pulse and stop Horizontal Deflection.

5. Micom(Microprocessor) Circuit.

The operating procedure of Micom(Microprocessor) and its associated circuit is as follows:

- 1) H and V sync signal is supplied from the signal cable.
- 2) The Micom(IC401) distinguishes polarity and frequency of H and V sync.
- 3) The Micom sets operating mode and offers the controlled data. (H-size, H-position, V-size, ... etc.)
- 4) The controlled data of each mode is stored in itself.
- 5) User can adjust screen condition by each OSD function. The data of the adjusted condition is stored in EEPROM(IC402).

6. Horizontal and Vertical Oscillation.

This circuit generates the horizontal pulse and the vertical pulse by taking the H and V sync signal.

This circuit consists of the STV9302(IC601) and the associated circuit.

7. D/D(DC to DC) Converter.

This circuit supplies DC voltage to the horizontal deflection output circuit by increasing DC 50V which is the secondary voltage of the SMPS in accordance with the input horizontal sync signal.

8. Side-Pincushion & Trapezoid Correction Circuit.

This circuit improves the side-pincushion and the trapezoid distortion of the screen by mixing parabola and saw-tooth wave to output of the horizontal deflection D/D converter which is used for the supply voltage(B +) of the deflection circuit.

9. Horizontal Deflection Output Circuit.

This circuit makes the horizontal deflection by supplying the saw-tooth current to the horizontal deflection yoke.

10. High Voltage Output & FBT(Flyback Transformer).

The high voltage output circuit is used for generating pulse to the primary coil of the FBT(Flyback Transformer) secondary of the FBT and it is supplied to the anode, focus, and screen voltage of the CRT.

11. H-Linearity Correction Circuit.

This circuit corrects the horizontal linearity for each horizontal sync frequency.

12. Vertical Output Circuit.

This circuit takes the vertical ramp wave from the STV6888(IC701) and performs the vertical deflection by supplying the saw-tooth current to the vertical deflection yoke.

13. Dynamic Focus Output Circuit.

This circuit takes the horizontal and the vertical parabola waves from the STV6888(IC701) and amplifies it to maintain constant focus on center and corners in the screen.

14. H & V Blanking and Brightness Control.

Blanking circuit eliminates retrace line by supplying negative pulse to the G1 of the CRT. And Brightness circuit is used for control of the screen brightness by changing DC level of the G1.

15. Image Rotation (Tilt) Circuit.

This circuit corrects the tilt of the screen by supplying the image rotation signal to the tilt coil which is attached near the deflection yoke of the CRT.

16. Video Pre-Amp Circuit.

This circuit amplifies the analog video signal from 0-0.7V to 0-4V. It is operated by taking the clamp, R, G, B drive and contrast signal from the Micom(IC401).

17. Video Output Amp Circuit.

This circuit amplifies the video signal which comes from the video pre-amp circuit and amplified it to applied the CRT cathode.

ADJUSTMENT

GENERAL INFORMATION

All adjustment are thoroughly checked and corrected when the monitor leaves the factory, but sometimes several adjustments may be required.

Adjustment should be following procedure and after warming up for a minimum of 30 minutes.

- Alignment appliances and tools.
 - IBM compatible PC.
 - Programmable Signal Generator.
(eg. VG-819 made by Astrodesign Co.)
 - EPROM or EEPROM with saved each mode data.
 - Alignment Adaptor and Software.
 - Digital Voltmeter.
 - White Balance Meter.
 - Luminance Meter.
 - High-voltage Meter.

AUTOMATIC AND MANUAL DEGAUSSING

The degaussing coil is mounted around the CDT so that automatic degaussing when turn on the monitor. But a monitor is moved or faced in a different direction, become poor color purity cause of CDT magnetized, then press DEGAUSS on the OSD menu.

ADJUSTMENT PROCEDURE & METHOD

- Install the cable for adjustment such as Figure 1 and run the alignment program on the DOS for IBM compatible PC.
- Set external Brightness and Contrast volume to max position.

1. Adjustment for High-Voltage.

- 1) Display cross hatch pattern at Mode 4.
- 2) DIST.ADJ.→CTRL PWM → High Voltage Command.
- 3) Adjust High Voltage to $25.8\text{kV}\pm 0.1\text{ kVdc}$.
- 4) Press Enter Key.

2. Adjustment for Factory Mode (Preset Mode).

- 1) Display cross hatch pattern at Mode 1.
- 2) Run alignment program for FB770H on the IBM compatible PC.
- 3) EEPROM → ALL CLEAR → Y(Yes) command.
<Caution> Do not run this procedure unless the EEPROM is changed. All data in EEPROM (mode data and color data) will be erased.
- 4) Power button of the monitor turn off → turn on.
- 5) COMMAND→PRESET START→Y(Yes) command.
- 6) DIST. ADJ. → CTRL PWM → TILT command.
- 7) Adjust tilt as arrow keys to be the best condition.
- 8) DIST. ADJ. → BALANCE command.
- 9) Adjust parallelogram as arrow keys to be the best condition.

- 10) Adjust balance of pin-balance as arrow keys to be the best condition.
- 11) DIST. ADJ. → FOS. ADJ command.
- 12) Adjust V-SIZE as arrow keys to $230\pm 2\text{mm}$.
- 13) Adjust V-POSITION as arrow keys to center of the screen.
- 14) Adjust H-SIZE as arrow keys to $310\pm 2\text{mm}$.
- 15) Adjust H-POSITION as arrow keys to center of the screen.
- 16) Adjust S-PCC (Side-Pincushion) as arrow keys to be the best condition.
- 17) Adjust TRAPEZOID as arrow keys to be the best condition.
- 18) Save of the Mode 1.
- 19) Display from Mode 2 to 4 and repeat above from number 12) to 19)
- 20) PRESET EXIT → Y (Yes) command.

3. Adjustment for White Balance and Luminance.

- 1) Set the White Balance Meter.
- 2) Press the DEGAUSS on the OSD menu for demagnetization of the CDT.
- 3) COLOR ADJ. → LUMINANCE command of the alignment program.
- 4) Set Brightness and Contrast to Max position.
- 5) Display color 0,0 pattern at Mode 4.
- 6) COLOR ADJ.→ BIAS ADJ.→ COLOR No. → 1 command of the alignment program.
- 7) Check whether green color or not at R-BIAS and G-BIAS to min position and B-BIAS to 250(CD) and Sub-Brightness to 127(2F) position. Adjust G2 (screen) command to $0.4\pm 0.05\text{FL}$ of the raster luminance.
- 8) Adjust R-BIAS and G-BIAS command to $x=0.283\pm 0.005$ and $y=0.298\pm 0.005$ on the White Balance Meter with PC arrow keys.
- 9) Adjust SUB-Brightness command to $0.4\pm 0.1\text{FL}$ of the raster luminance.
- 10) Adjust repeat number 8).
- 11) After push the "ENTER" key.
- 11-1) COMMAND → PRESET START → Y(Yes) command.
- 12) Display color 15,0 full white pattern at Mode 4.
- 13) DRIVE ADJ.→ No 1. command.
- 14) Set Brightness and Contrast to Max position.
- 15) Set SUB-CONTRAST 220(CD) (decimal) position.
- 16) Set B-DRIVE to 150(96) at DRIVE of the alignment program.

- 17-1) Adjust R-DRIVE and G-DRIVE command to white balance $x=0.283\pm0.003$ and $y=0.298\pm0.003$ on the White Balance Meter with PC arrow keys.
- 17-2) Display color 15,0 window pattern (70x70mm) at mode 4.
 - 18) Adjust SUB-CONTRAST command to $50\pm2FL$.
 - 19) Display color 15,0 full white pattern at Mode 4.
 - 20) Set Brightness and Contrast to Max position.
 - 21) COLOR ADJ. → LUMINANCE → ABL command.
 - 22) Adjust ABL to $32\pm1FL$ of the luminance.
 - 23) After push the "ENTER" key, and "COMMAND → PRESET EXIT → Y(Yes)" command.
 - 24) Exit from the program.

4. Input EDID Data.

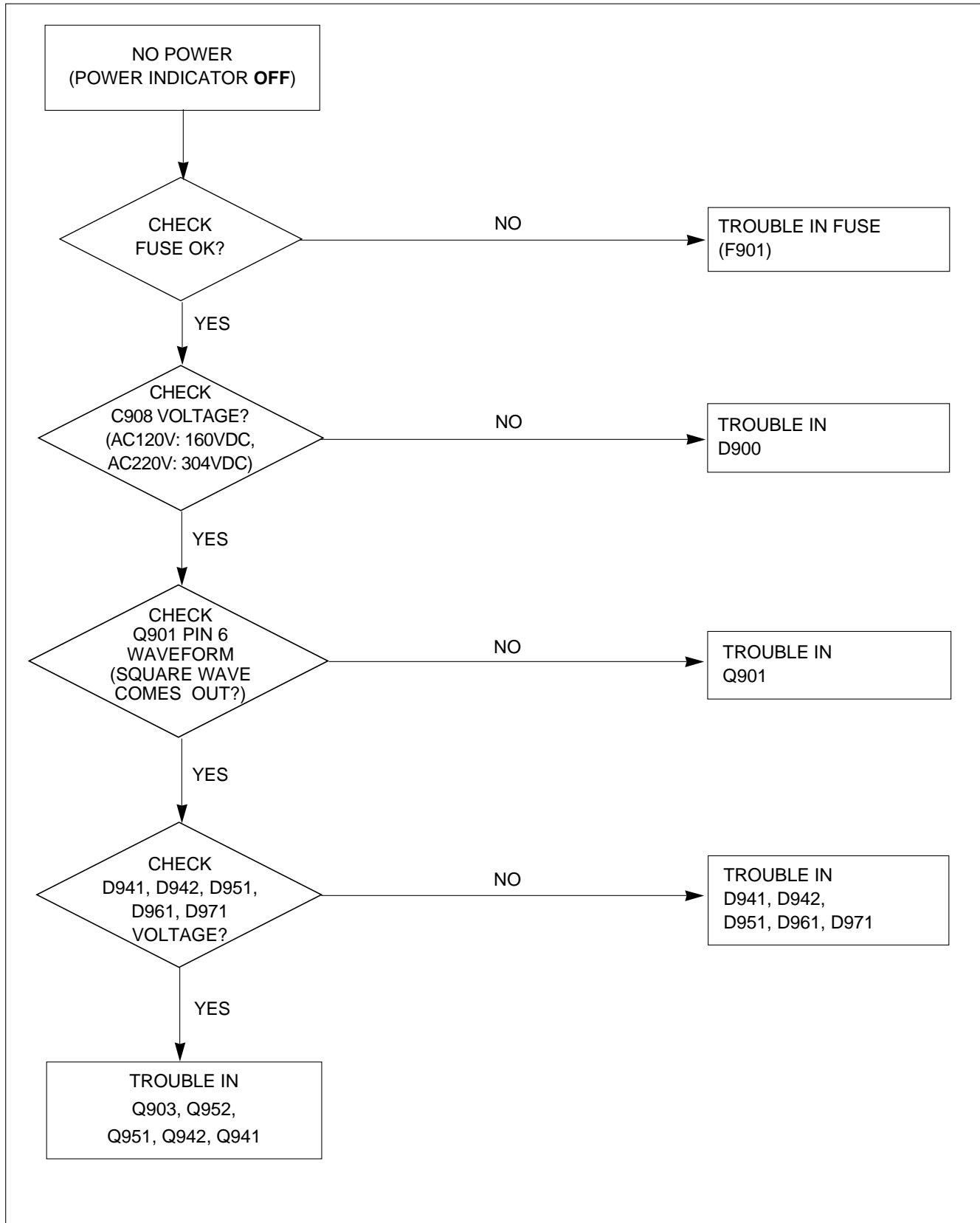
- 1) Display color 15,0 cross hatch pattern at Mode 4.
- 2) EEPROM → Write EDID command and confirm "EDID Write OK!!" message of monitor.
- 3) Exit from the alignment program.
- 4) Power switch OFF/ON for EDID data save.

5. Adjustment for Focus.

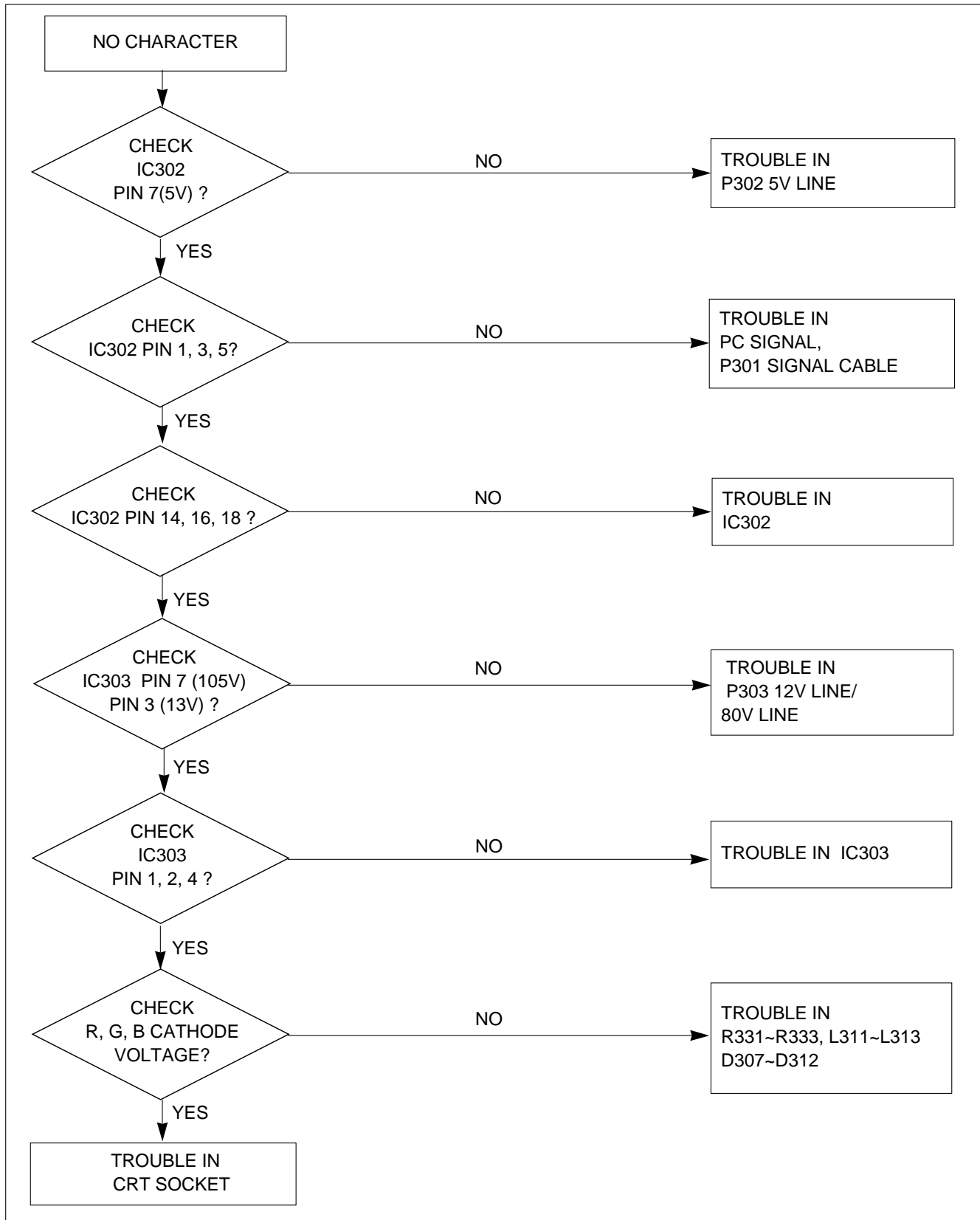
- 1) Set the Brightness and Contrast to max position.
- 2) Display H character in full screen at Mode 4.
- 3) Adjust two Focus control on the FBT that focus should be the best condition.

TROUBLESHOOTING GUIDE

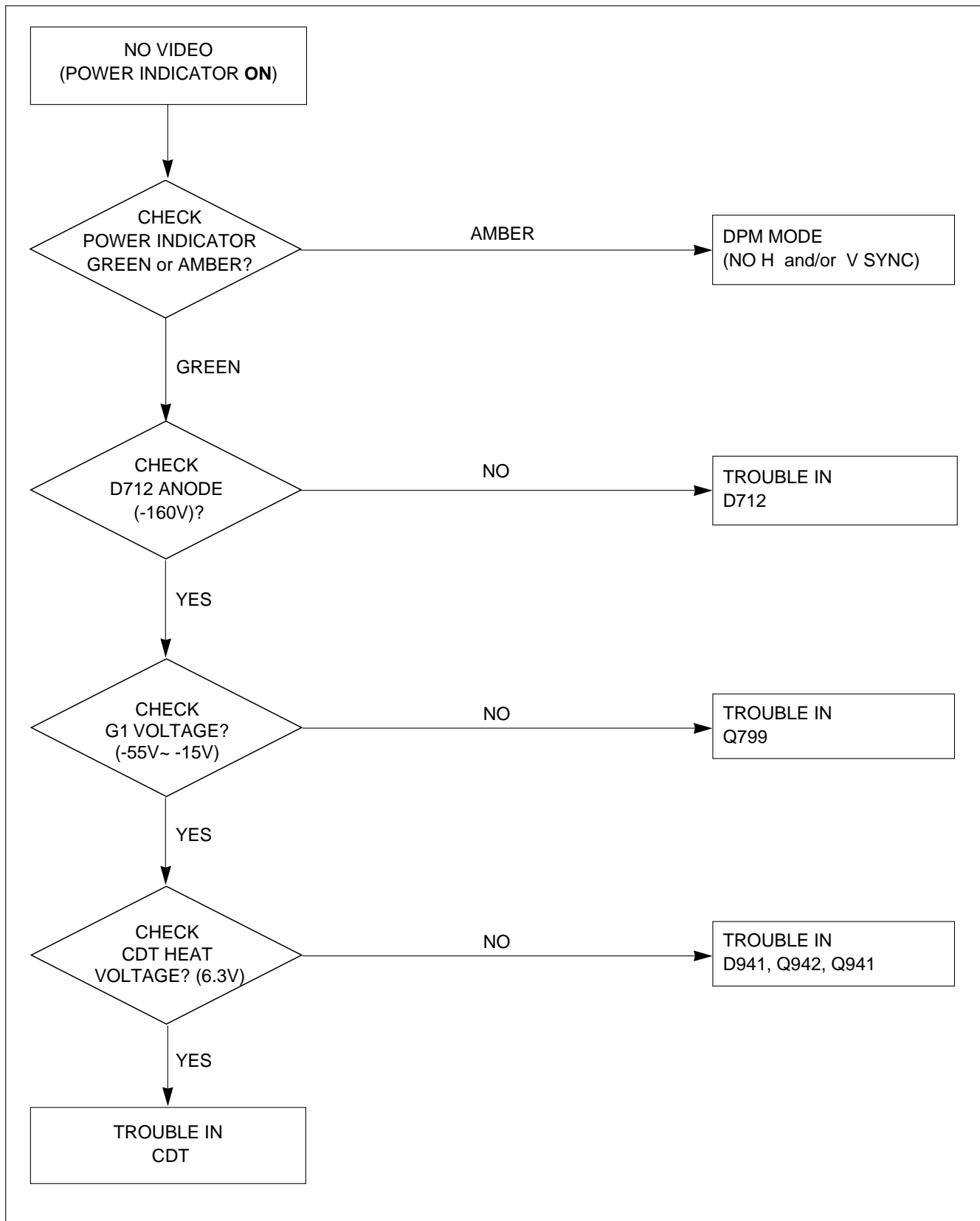
1. NO POWER



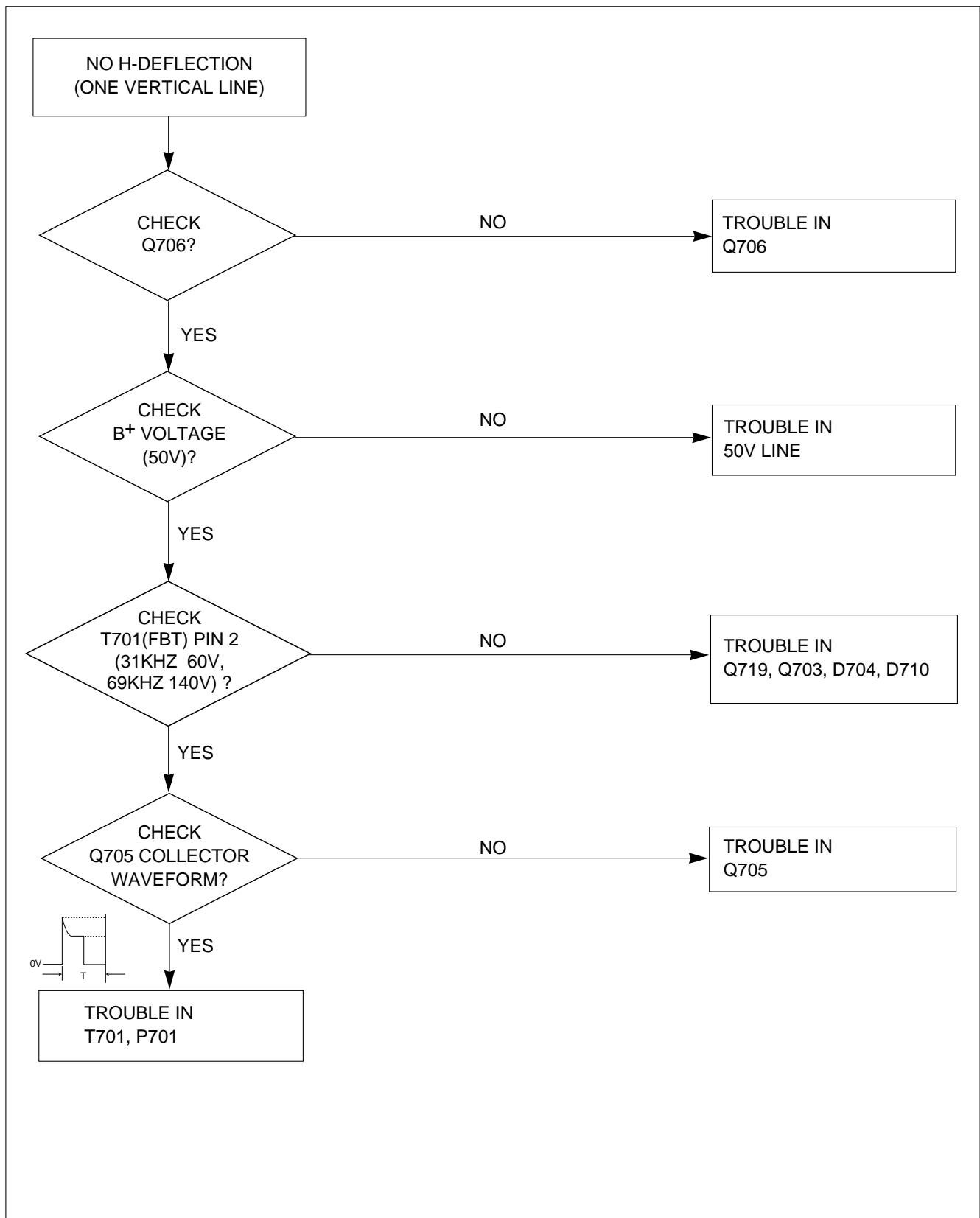
2. NO CHARACTER



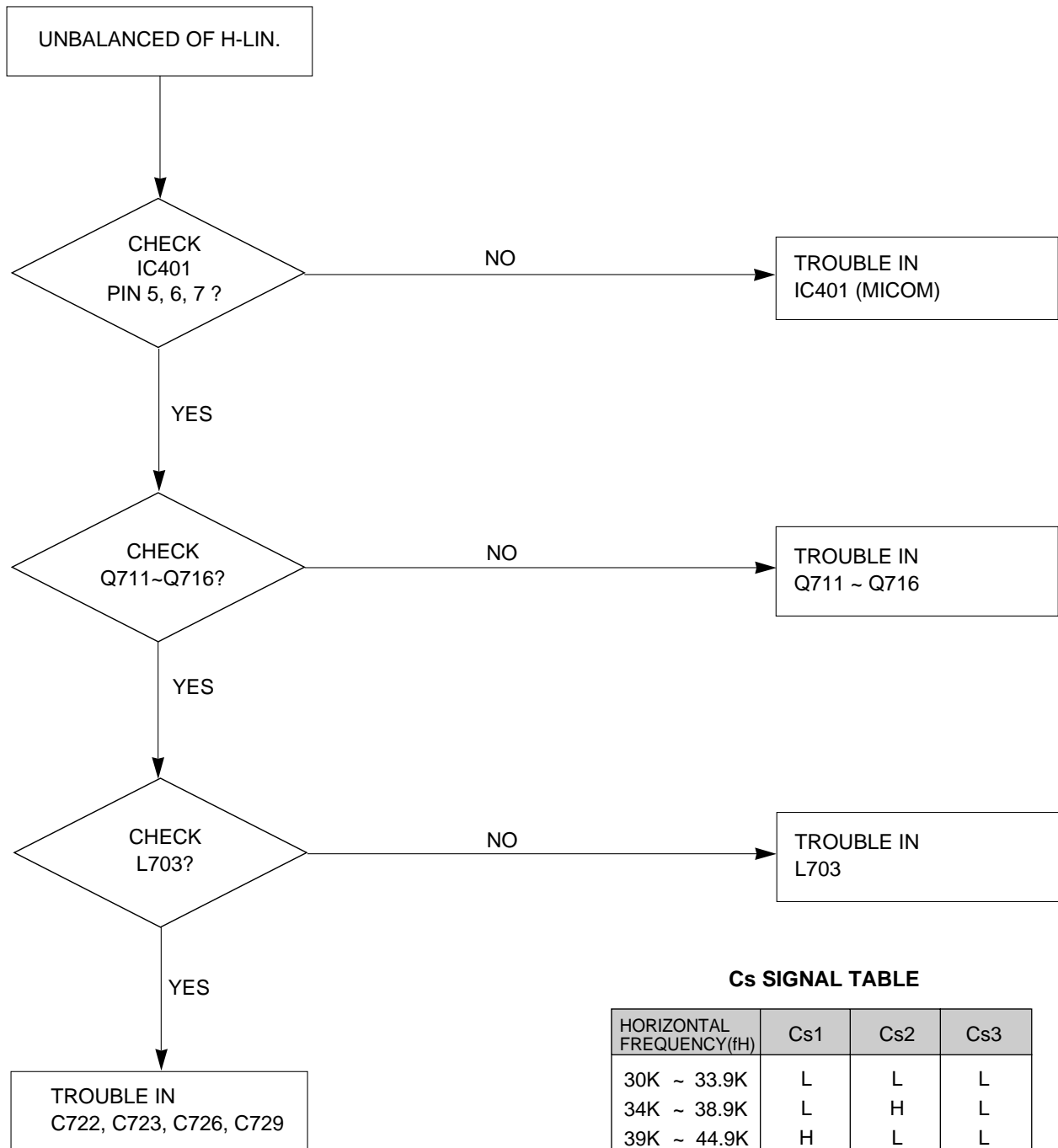
3. NO RASTER



4. NO HORIZONTAL DEFLECTION



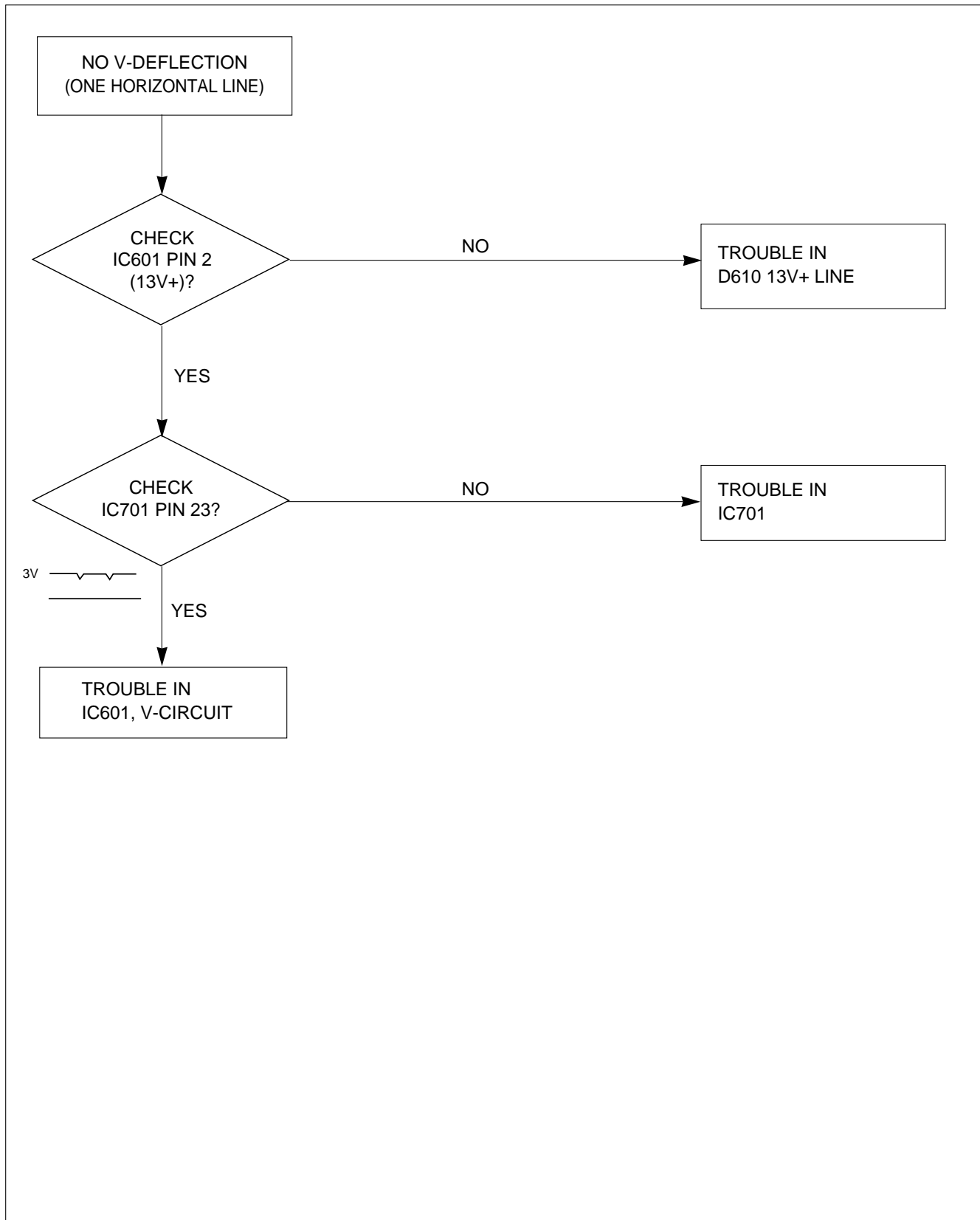
5. TROUBLE IN H-LINEARITY



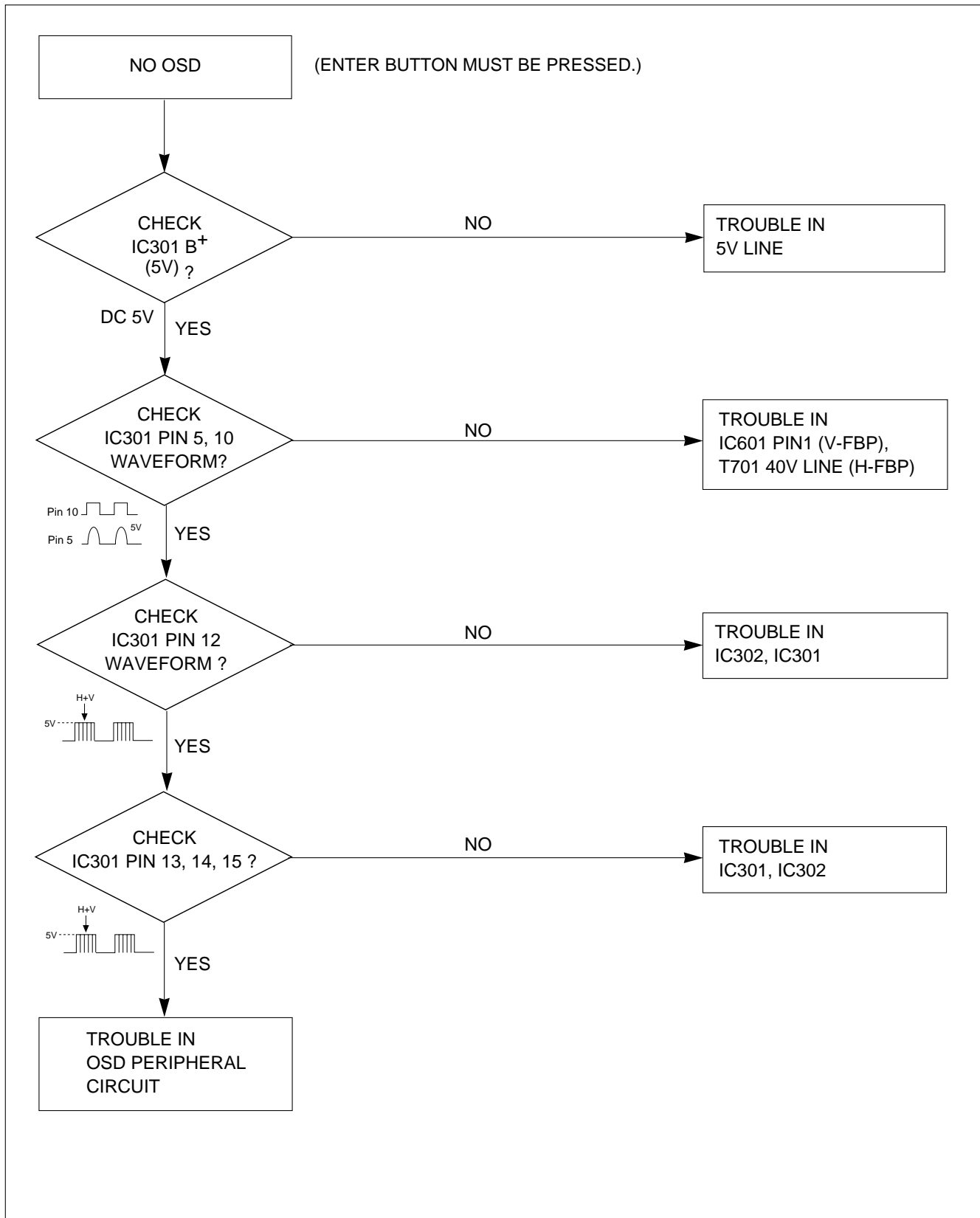
Cs SIGNAL TABLE

HORIZONTAL FREQUENCY(fH)	Cs1	Cs2	Cs3
30K ~ 33.9K	L	L	L
34K ~ 38.9K	L	H	L
39K ~ 44.9K	H	L	L
45K ~ 48.9K	H	L	L
49K ~ 51.9K	H	L	H
52K ~ 57.9K	H	L	H
58K ~ 61.9K	H	H	L
62K ~ 65.9K	H	H	L
66K ~ 70K	H	H	H

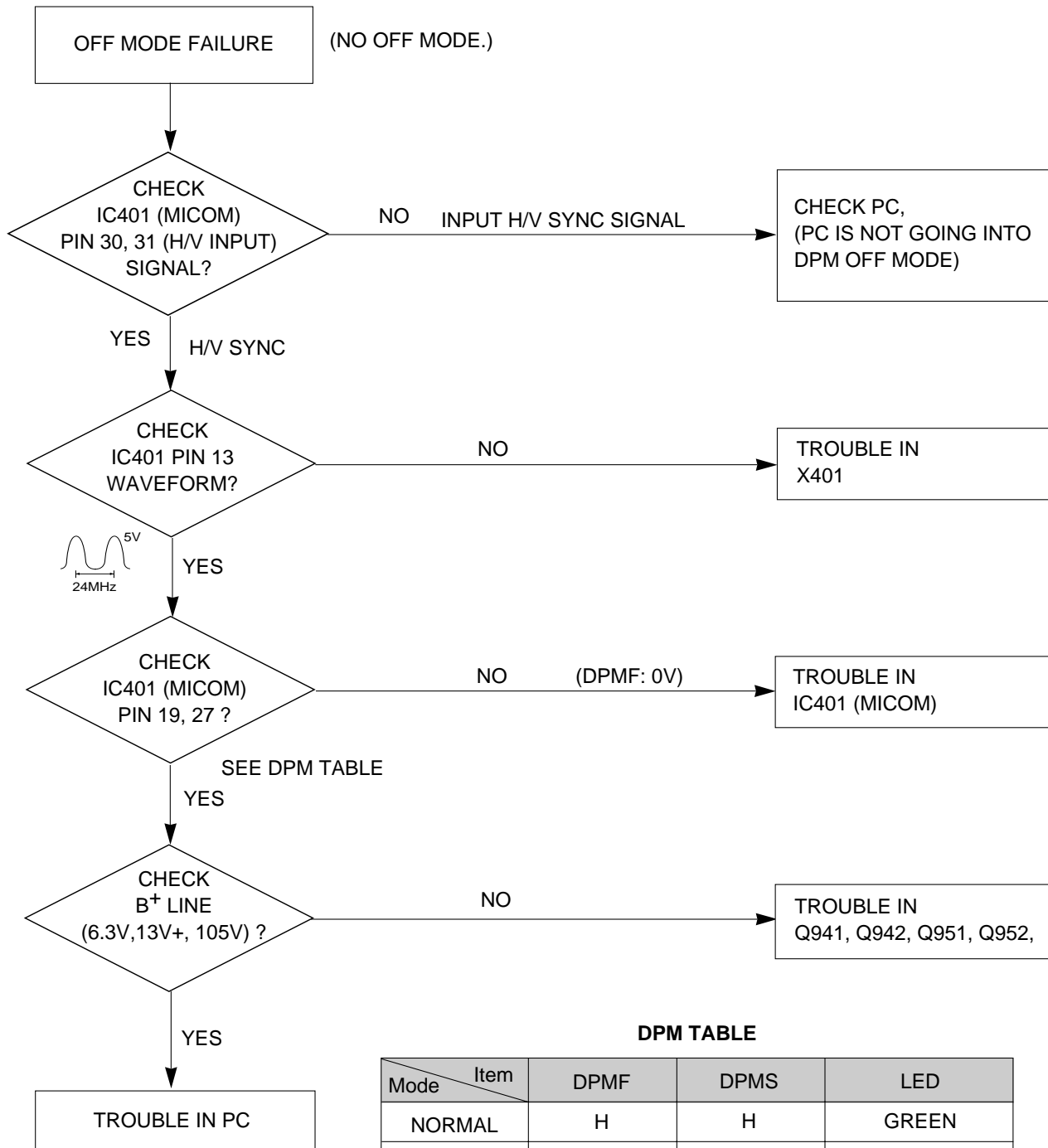
6. NO VERTICAL DEFLECTION



7. TROUBLE IN OSD



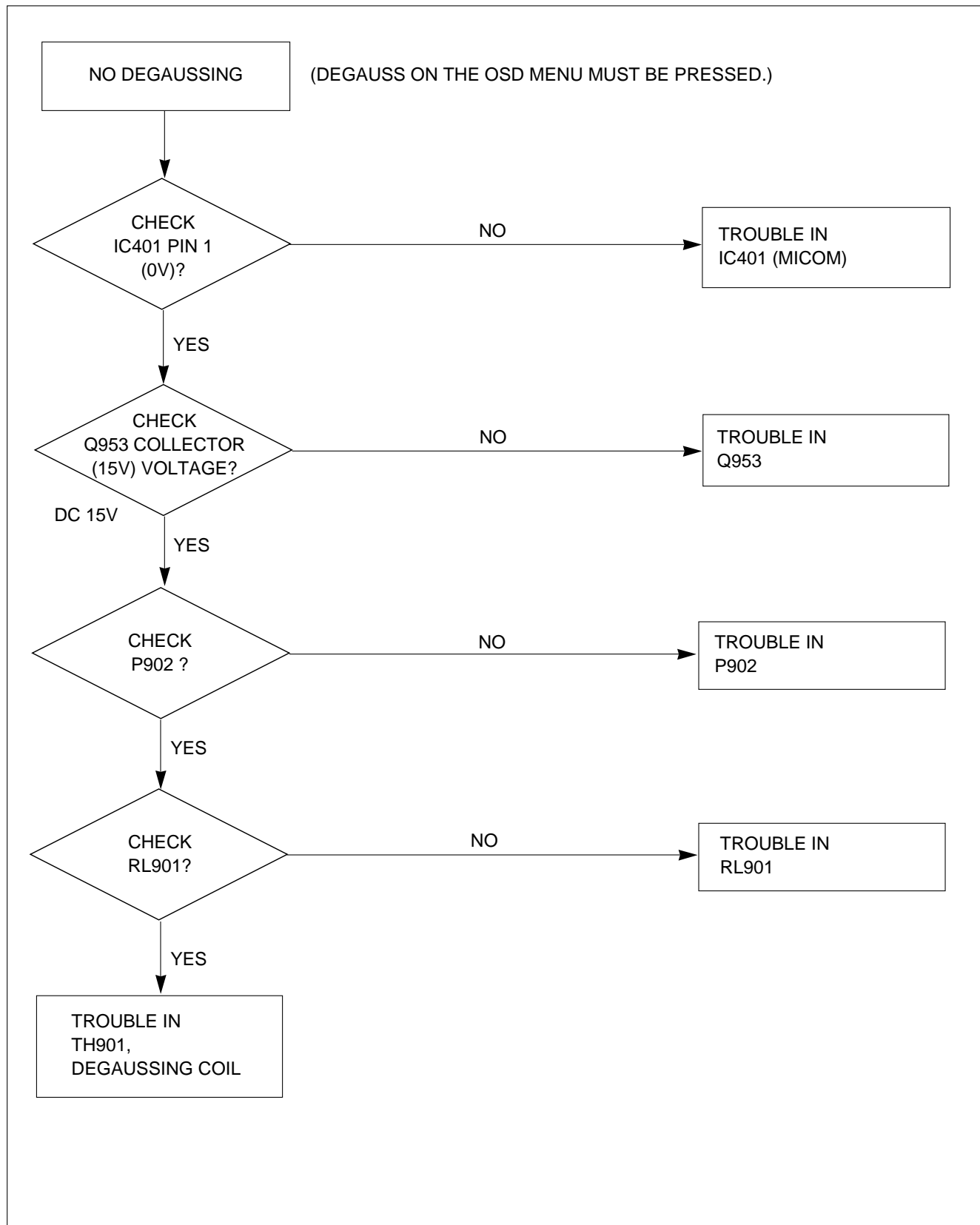
8. TROUBLE IN DPM



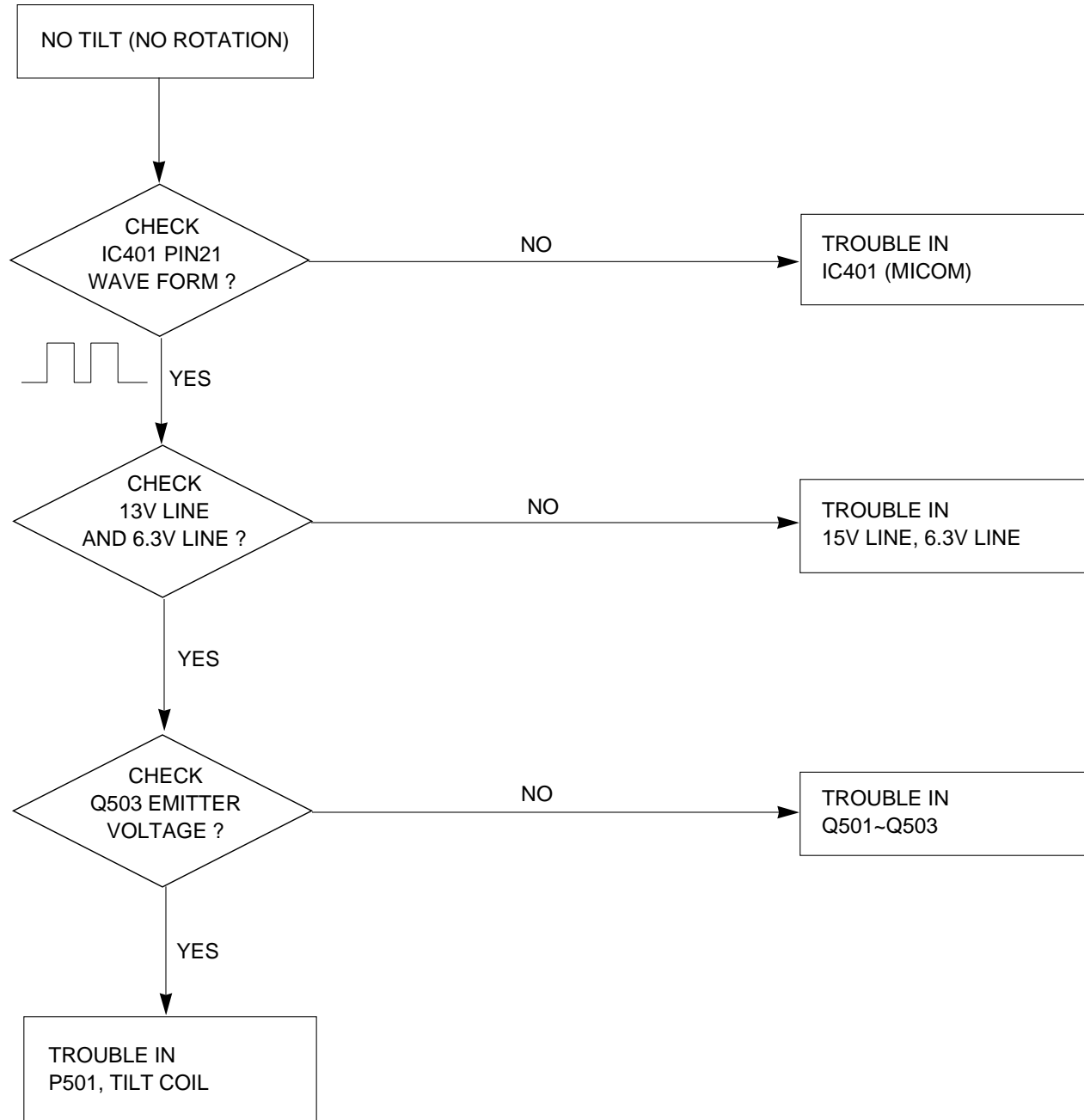
DPM TABLE

Mode \ Item	DPMF	DPMS	LED
NORMAL	H	H	GREEN
STAND-BY	L	H	AMBER
SUSPEND	L	H	AMBER
OFF	L	L	AMBER

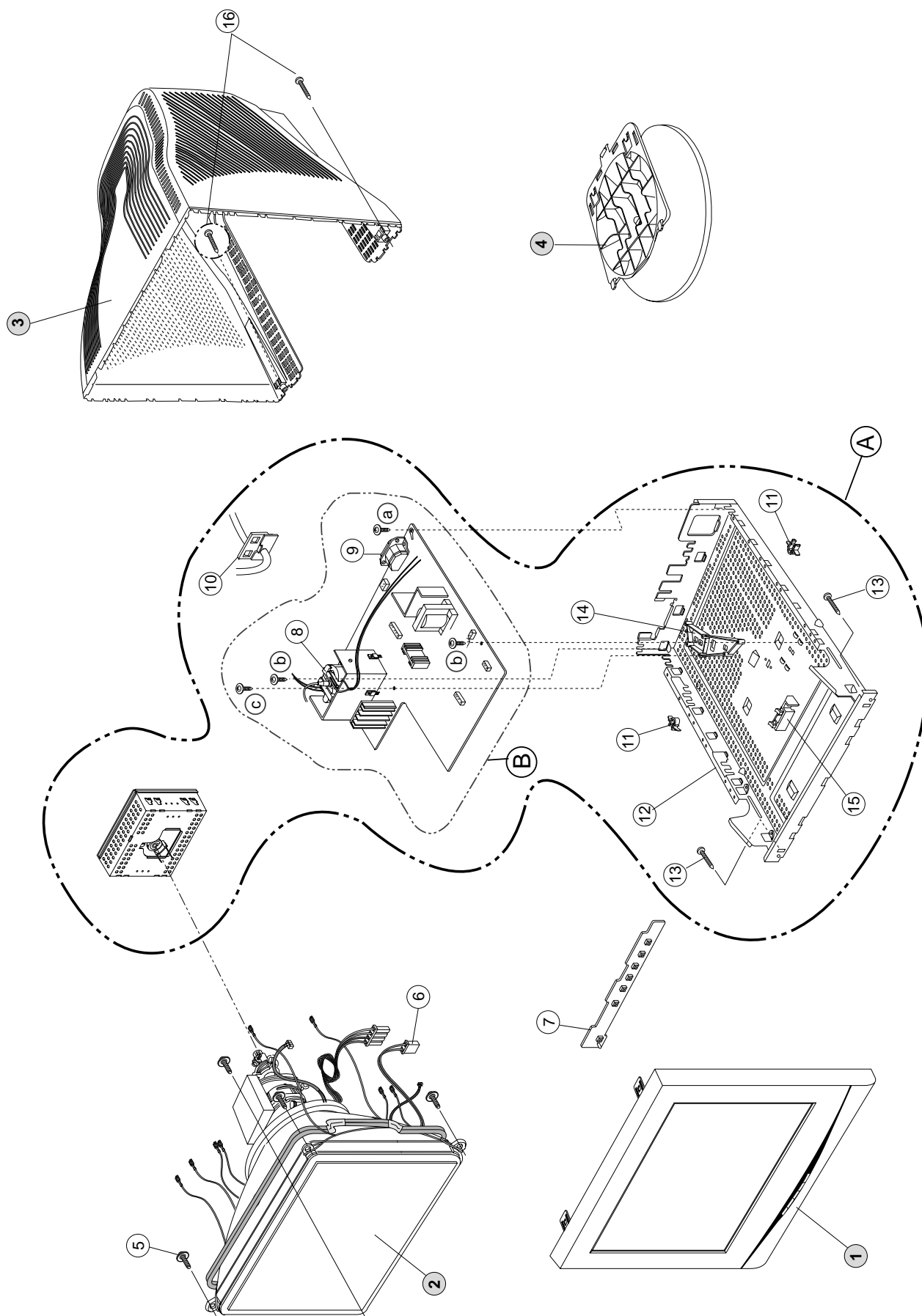
9. NO DEGAUSSING



10. NO TILT (NO ROTATION)



EXPLODED VIEW




EXPLODED VIEW PARTS LIST


Ref. No.	Part No.	Description
1	3091TKC074F	CABINET ASSEMBLY, FB770G BRAND 068 DI F700B For Europe, Israel, S.Africa, India
	3091TKC074A	CABINET ASSEMBLY, FB770G BRAND 068 For IOMG, USA, Russia
2	6318L17013A	CDT(CIRC), M41QBF423X 41NPLD LG-PHILIPS 70KHZ 29.1MM FLATRON TCO- Northern hemisphere
	6318L17013B	CDT(CIRC), M41QBF423X 41QPLD LG-PHILIPS 70KHZ 29.1MM FLATRON TCO- Equatorial
3	3809TKC042A	BACK COVER ASSEMBLY, 2ND FLATRON 3808TKC041A
4	3043TKK103B	TILT SWIVEL ASSEMBLY, FB770H T060 B058 DI CKD For Europe, Israel, S.Africa, India
	3043TKK103A	TILT SWIVEL ASSEMBLY, FB770H T060 B058 For IOMG, USA, Russia
5	339-002H	SCREW ASSY, PHP+5*20(FZMY)+GW18 NEW TYPE
6	6140TC2014B	COIL,DEGAUSSING, - GET D-COIL,0.5*130TS,1410,WITH PURITY,FB770G
7	6871TST319C	PWB(PCB) ASSEMBLY,SUB, FB770H CONTROL TOTAL BRAND LGEDI CKD For Europe, Israel, S.Africa, India
	6871TST319D	PWB(PCB) ASSEMBLY,SUB, FB770H CONTROL TOTAL IOMG CA-124 For IOMG
	6871TST319B	PWB(PCB) ASSEMBLY,SUB, FB770H CONTROL TOTAL BRAND LGENT For USA, Russia
8	6174T11004A	FBT (FLY BACK TRANSFORMER), 1055A, CB777H LG-PHILIPS 17"/70KHZ FST
9	6620TKB002A	SOCKET(CIRC),POWER BAE EUN AC UNIVERSAL 3PIN BLACK
10	6850TA9010A	CABLE,D-SUB, UL2990-9C(5.8) AT 1560MM GRAY(85964) FB770H DM
11	4930TKK031C	HOLDER, PCB FIX , PC+ABS
12	4950TKK368F	METAL, SHIELD BOTTOM "E" CKD For Europe, Israel, S.Africa, India, IOMG
	4950TKK368E	METAL, SHIELD BOTTOM FB770H-NO PEMNUT For USA, Russia
13	4810TKK204C	BRACKET, H-CHASSIS HOLDER FBT, A-CKD For Europe, Israel, S.Africa, India
14	4810TKK204A	BRACKET, CB777H HOLDER FBT For IOMG, USA, Russia
15	4930TKK036A	HOLDER, PCB FIX FB770G 2ND FLATRON
16	332-102E	SCREW, PTP+4*16(MSWR/FZMY)
A	3313T17266C	MAIN TOTAL ASSEMBLY, FB770H BRAND CA-124 For Europe, Israel, S.Africa, India
	3313T17266D	MAIN TOTAL ASSEMBLY, FB770H IOMG CA-124 For IOMG
	3313T17266B	MAIN TOTAL ASSEMBLY, FB770H BRAND CA-119 LGENT For USA, Russia
B	6871TMT327C	PWB(PCB) ASSEMBLY,MAIN, FB770H KLEUED BRAND CA-124 TOTAL For Europe, Israel, S.Africa, India
	6871TMT327D	PWB(PCB) ASSEMBLY,MAIN, FB770H SLIOEI IOMG CA-124 TOTAL For IOMG
	6871TMT327B	PWB(PCB) ASSEMBLY,MAIN, FB770H KLRDET BRAND CA-119 TOTAL For USA, Russia
a	332-112F	SCREW,DRAWING, D3.5 L10.0 MSWR/FZMY +SW3.5+RW3.5
b	4001TKK004E	SCREW ASSEMBLY, TAPTITE P TYPE D3.0 L10.0 MSWR/FZMY SW3+RW10
c	332-095B	SCREW,DRAWING, PZP+3*10(MSWR/FZMY)

REPLACEMENT PARTS LIST

CAUTION: BEFORE REPLACING ANY OF THESE COMPONENTS,
READ CAREFULLY THE **SAFETY PRECAUTIONS** IN THIS MANUAL.

* NOTE : **S** SAFETY Mark 
AL ALTERNATIVE PARTS

DATE: 2002. 10 . 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
CAPACITORS				
		C201	0CN1040K949	0.1M 50V Z F TA52
		C301	0CK1040K945	0.1UF 50V Z F TR
		C302	0CK1040K945	0.1UF 50V Z F TR
		C303	0CK1040K945	0.1UF 50V Z F TR
		C305	181-288C	MKT 100V 224JTR PHS 26224
		C306	0CE107CF638	100UF SHL,SD 16V M FM5 TP 5
		C307	0CK1040K945	0.1UF 50V Z F TR
		C308	0CK1040K945	0.1UF 50V Z F TR
		C309	0CK1040K945	0.1UF 50V Z F TR
		C310	0CE106CF638	10UF SHL,SD 16V M FM5 TP 5
		C311	0CK1040K945	0.1UF 50V Z F TR
		C312	0CK1040K945	0.1UF 50V Z F TR
		C313	0CE476CF638	47UF SHL,SD 16V M FM5 TP 5
		C314	0CK1010K515	100PF 50V K B TR
		C315	0CK10202515	1000PF D 2KV 10% TR B(Y5P)
		C325	0CK1040K945	0.1UF 50V Z F TR
		C326	0CK4710W515	470P 500V K B TS
		C327	0CK10302940	0.01M 2KV Z F S
		C328	0CK10302945	0.01UF 2KV Z F TR
		C330	181-288E	MKT 100V 474JTR PHS 26474
		C331	0CC2200W415	22PF 500V J NP0 TR
		C332	0CK10301945	10000PF D 1KV Z F(Y5V) TR
		C346	0CE475CP638	4.7UF SHL,SD 160V M FM5 TP 5
		C380	0CE107CF638	100UF SHL,SD 16V M FM5 TP 5
		C383	0CE475CK638	4.7UF SHL,SD 50V M FM5 TP 5
		C389	0CE475CP638	4.7UF SHL,SD 160V M FM5 TP 5
		C390	0CK10301945	10000PF D 1KV Z F(Y5V) TR
		C394	0CN1520F569	1500P 16V K X TA52
		C395	0CK1520K515	1500P 50V K B TS
		C396	0CK1520K515	1500P 50V K B TS
		C397	0CE107CF638	100UF SHL,SD 16V M FM5 TP 5
		C401	0CK1040K945	0.1UF 50V Z F TR
		C402	0CE476CF638	47UF SHL,SD 16V M FM5 TP 5
		C403	0CK1040K945	0.1UF 50V Z F TR
		C406	0CK1010K515	100PF 50V K B TR
		C407	0CK1010K515	100PF 50V K B TR
		C408	0CK1040K945	0.1UF 50V Z F TR
		C409	0CK1010K515	100PF 50V K B TR
		C410	0CK1010K515	100PF 50V K B TR
		C416	0CE475CK638	4.7UF SHL,SD 50V M FM5 TP 5
		C501	0CE106CF638	10UF SHL,SD 16V M FM5 TP 5
		C510	0CE225CK638	2.2UF SHL,SD 50V M FM5 TP 5
		C511	0CE106CF638	10UF SHL,SD 16V M FM5 TP 5
		C599	0CE225CK638	2.2UF SHL,SD 50V M FM5 TP 5
		C601	0CE477CF618	470UF SHL 16V M FL TP5
		C603	0CE227CK618	220U SHL 50V M FL TP5
		C605	181-288T	MKT 100V 223KTR PHS85223
		C606	0CQ4721N419	0.0047U 100V J POLY NI TP5

DATE: 2002. 10 . 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C611	0CE477CF618	470UF SHL 16V M FL TP5
		C613	181-288Q	MKT 100V 154JTR PHS26154
		C614	0CE475CK638	4.7UF SHL,SD 50V M FM5 TP 5
		C615	0CQ4721N419	0.0047U 100V J POLY NI TP5
		C617	0CK1040K945	0.1UF 50V Z F TR
		C618	0CK1040K945	0.1UF 50V Z F TR
		C701	181-288B	MKT 100V 104JTR PHS26104
		C702	0CE476CK638	47UF SHL,SD 50V M FM5 TP 5
		C703	0CK8210K515	820P 50V K B TS
		C704	0CQ1031N419	0.01U 100V J POLY NI TP
		C705	0CE475CK638	4.7UF SHL,SD 50V M FM5 TP 5
		C706	0CE105CK638	1UF SHL,SD 50V 20% FM5 TP 5
		C708	0CE227CH638	220UF SHL,SD 25V M FM5 TP 5
		C709	0CE225CK638	2.2UF SHL,SD 50V M FM5 TP 5
		C710	181-288Q	MKT 100V 154JTR PHS26154
		C711	181-288E	MKT 100V 474JTR PHS 26474
		C712	181-288B	MKT 100V 104JTR PHS26104
		C713	0CK2210K515	220P 50V K B TS
		C714	0CE107CH638	100UF SHL,SD 25V M FM5 TP 5
		C715	181-288N	MKT 100V 103JTR PHS86103
		C717	0CE476CF638	47UF SHL,SD 16V M FM5 TP 5
		C719	0CZZTAB001F	SHL-BP SYE / SWE 50V 3.3UF 20%
		C722	181-303D	184J 30.0*18.5*11.0*20.0 250V
		C723	181-305A	MPP 250V 104J S=10.0
		C724	0CK1040K945	0.1UF 50V Z F TR
		C725	0CK6810W515	680P 500V K B TS
		C726	181-305Y	MPP 250 204J S=10.0
		C727	0CN1040K949	0.1M 50V Z F TA52
		C728	0CQ5621N419	5600P 100V J POLY NI TP
		C729	181-305V	514J 26.0*18.0*11.0*15.0 250V
		C730	0CN1040K949	0.1M 50V Z F TA52
		C731	0CBZTBU004D	542J 29.0*20.5*9.5*20.0 2.5KV
		C732	181-288N	MKT 100V 103JTR PHS86103
		C733	0CBZTBU003J	392J 20.0*12.5*7.5*10.0 800V J
		C734	0CE2266F618	22M SMS 16V M FM5 TP(5)
		C736	0CQ4721N419	0.0047U 100V J POLY NI TP5
		C737	0CK10102515	100PF D 2KV 10% B(Y5P) TR
		C738	181-302V	393J 19.5*14.0*8.0*10.0 250V J
		C739	0CE106EK638	10UF KMG 50V M FM5 TP 5
		C740	0CE337CL618	330UF SHL 63V M FL TP5
		C741	0CZZTFT002B	ECQV1H154JZ3 154J 50V TP5.0 MA
		C742	181-288K	MKT 100V 683JTR PHS26683
		C743	0CE334CK638	0.33UF SHL,SD 50V 20% TP 5 FM5
		C744	181-305L	684J 26.0*19.0*12.5*15.0 250V
		C745	0CK5610W515	560P 500V K B TS
		C746	0CK3310W515	330P 500V K B TS
		C747	181-288D	MKT 100V 473JTR PHS26473
		C748	0CK1510W515	150PF 500V K B TR
		C749	0CE106CQ618	10UF SHL 200V M FL TP5

DATE: 2002. 10. 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C750	0CK1040K945	0.1UF 50V Z F TR
		C751	181-288J	MKT 100V 563JTR PHS26563
		C752	0CQ4721N419	0.0047U 100V J POLY NI TP5
		C753	0CQ1021N419	1000P 100V J POLY NI TP
		C754	0CC4700W405	47PF 500V J SL TP
		C759	0CQ1821N419	1800P 100V J POLY NI TP
		C767	0CK10301945	10000PF D 1KV Z F(Y5V) TR
		C771	0CK10301945	10000PF D 1KV Z F(Y5V) TR
		C781	0CK1030K945	0.01UF 50V Z F TR
		C801	0CK1040K945	0.1UF 50V Z F TR
		C802	0CE106CK638	10UF SHL,SD 50V M FM5 TP 5
		C805	0CE106CK638	10UF SHL,SD 50V M FM5 TP 5
		C810	0CE106CK638	10UF SHL,SD 50V M FM5 TP 5
		C821	0CK1040K945	0.1UF 50V Z F TR
		C822	0CN1040K949	0.1M 50V Z F TA52
		C830	0CK10102515	100PF D 2KV 10% B(Y5P) TR
		C901	0CBZTBU002A	BULK PCX2 335 224K
		C902	0CBZTBU002A	BULK PCX2 335 224K
		C903	0CZZTCB003D	BULK 7.5 CS E 102M 8.0 250V TD
		C904	0CKZTTA003A	SC E 222M 10.0FF7 250V TP7.5 S
		C905	0CKZTTA003A	SC E 222M 10.0FF7 250V TP7.5 S
		C906	0CZZTCB003D	BULK 7.5 CS E 102M 8.0 250V TD
		C907	0CZZTCB003C	BULK 7.5 CS E 472M 14.5 250V T
		C908	181-124R	220UF SMG(25.4*40) 400V M VNSN
		C909	0CK10301510	0.01M 1KV K B S
		C910	0CK27101515	270P 1KV K B TS
		C911	0CE475CK638	4.7UF SHL,SD 50V M FM5 TP 5
		C913	0CE476CK638	47UF SHL,SD 50V M FM5 TP 5
		C914	0CZZTFT001P	ECQB1H153JM3 153J 50V TP5.0 MA
		C915	0CK6810K515	680P 50V K B TS
		C917	0CK1020K515	1000PF 50V K B TR
		C918	0CN1040K949	0.1M 50V Z F TA52
		C940	0CKZTTA003A	SC E 222M 10.0FF7 250V TP7.5 S
		C941	0CE108CD618	1000UF SHL 10V M FL TP5
		C942	0CE107CF638	100UF SHL,SD 16V M FM5 TP 5
		C943	0CK56101515	560P 1KV K B TS
		C944	0CKZTTA003B	SC E 332M 12.5FF7 250V TP7.5 S
		C946	0CK1010W515	100P 500V K B TS
		C951	0CE108CF630	1000UF SHL 16V M FM5 BULK
		C952	0CE227CH638	220UF SHL,SD 25V M FM5 TP 5
		C953	0CE107CF638	100UF SHL,SD 16V M FM5 TP 5
		C954	0CE108CF630	1000UF SHL 16V M FM5 BULK
		C971	0CE476CN618	47UF SHL 100V M FL TP5
		C999	0CE337CL618	330UF SHL 63V M FL TP5
DIODEs				
		D201	0DLLT0089AA	LITEON LTL-1BEDJ-0C2 TP GREEN/
		D301	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D302	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D303	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D304	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D305	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D306	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D307	0DS124409AA	1SS244 TP ROHM KOREA
		D308	0DS124409AA	1SS244 TP ROHM KOREA
		D309	0DS124409AA	1SS244 TP ROHM KOREA

DATE: 2002. 10. 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		D310	0DS124409AA	1SS244 TP ROHM KOREA
		D311	0DS124409AA	1SS244 TP ROHM KOREA
		D312	0DS124409AA	1SS244 TP ROHM KOREA
		D313	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D399	0DR140059DA	1N4005TB52 TP LITEON DO41 600V
		D402	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D404	971-0016	TIN HDC 0.60H
		D501	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D511	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D512	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D602	0DRGF00069A	SB140 GULF TP DO41 40V 1A 40A
		D610	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO41
		D610	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO41
		D701	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D702	0DS124409AA	1SS244 TP ROHM KOREA
		D703	0DRTW00050A	MUR460L-1121 TIWAN SEMI BK DO2
		D704	0DR150001AA	DTV1500MFP ST SGS-THOMSON TO22
		D705	0DRGF00069A	SB140 GULF TP DO41 40V 1A 40A
		D706	0DRGF00110A	GRD07-15GP GULF BK DO201AD 150
		D709	971-0016	TIN HDC 0.60H
		D710	0DR400409AC	UF4004 GULF TP DO41 400V 1A 30
		D711	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D712	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO41
		D712	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO41
		D713	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D714	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D715	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D716	0DR140059DA	1N4005TB52 TP LITEON DO41 600V
		D717	0DR140059DA	1N4005TB52 TP LITEON DO41 600V
		D718	0DR140059DA	1N4005TB52 TP LITEON DO41 600V
		D719	0DR100009DA	RGP10J TP GULF SEMICONDUCTOR L
		D720	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D721	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D723	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D724	0DR140059DA	1N4005TB52 TP LITEON DO41 600V
		D767	0DR100009DA	RGP10J TP GULF SEMICONDUCTOR L
		D768	971-0016	TIN HDC 0.60H
		D801	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D802	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D803	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D821	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D900	0DRTW00071A	TS4B05G-1021 TIWAN SEMI ST NON
		D902	0DR153979AA	1N5397GP TP G.I DO201AD 600V 1
		D904	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO41
		D904	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO41
		D905	0DD400709CB	UF4007 TP G.I DO204AL 1000V 1
		D906	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO41
		D906	0DR100009CD	RGP10G-1021 TIWAN SEMI TP DO41
		D908	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D910	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D911	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D941	0DR100009LA	UG1D TP G.I DO204AL 200V 1A 40
		D942	0DR400409AC	UF4004 GULF TP DO41 400V 1A 30
		D951	0DRTW00044B	UG2DL-1021 TIWAN SEMI BK DO15
		D952	0DS141489AB	1N4148 TP GRANDE DO-34 500MW 1
		D961	0DRTW00060A	SF38GL-1121 TIWAN SEMI BK DO20

DATE: 2002. 10. 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		D971	0DR100009DA	RGP10J TP GULF SEMICONDUCTOR L
		ZD402	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500MW
		ZD403	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500MW
		ZD404	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500MW
		ZD405	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500MW
		ZD407	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500MW
		ZD410	0DZ560009AG	GDZJ5.6B TP GRANDE DO-34 500MW
		ZD701	0DZ120009BF	GDZJ12B TP GRANDE DO34 0.5W 12
		ZD702	971-0016	TIN HDC 0.60H
		ZD902	0DZ510009BE	GDZ5.1B TP GRANDE DO34 500MW 5
ICs				
		IC301	0IPRPWL001A	6805-N160WT-87A WELTREND 16, P
		IC302	0IPRPSG014A	STV9211 SGS-THOMSON 20P,DIP ST
		IC303	0IPRPSG004B	STV9556 SGS-THOMSON 11P,CLIPWA
		IC401	0IZZTSZ219A	SS 42PIN ST H6 STM
		IC402	0ISG240860A	M24C08-BN6 8DIP BK 8K SERIAL I
		IC601	0IPRPSG016A	STV9302A SGS-THOMSON TO220,7P
		IC701	0IPRPSG017A	STV6888 SGS-THOMSON 32P,SDIP S
		IC901	0ISS384200A	KA3842B (PWM)
COILs & COREs				
		L301	0LA0560K119	0.56UH K 2.3*3.4 TP
		L302	0LA0560K119	0.56UH K 2.3*3.4 TP
		L303	0LA0560K119	0.56UH K 2.3*3.4 TP
		L304	0LA1000K119	100UH K 2.3*3.4 TP
		L702	6140TBZ025C	DR14*20 150UH 0.12*25MM 51T H-
		L703	6140TYZ011G	- GET DR14*25,4.0UH,EB770H
		L705	6140TBZ026C	DR15*18-C9.8 100UH 0.1*30MM 40
		L901	6200TZZ004A	SQE2626 NAMYANG BK L/FILTER 15
		L903	125-159A	FERRITE KQ-1 (RADIAL TAPPING)
		FB201	6210TCE003J	BAS2550T BO SUNG 2550MM AXIAL5
		FB303	6210TCE003A	BRD3510B BO SUNG 3510MM RADIAL
		FB304	6210TCE003J	BAS2550T BO SUNG 2550MM AXIAL5
		FB305	6210TCE003A	BRD3510B BO SUNG 3510MM RADIAL
		FB306	6210TCE003A	BRD3510B BO SUNG 3510MM RADIAL
		FB314	6210TCZ001J	BAS3550T0(125-022J) BO SUNG RH
		FB315	6210TCZ001J	BAS3550T0(125-022J) BO SUNG RH
		FB316	6210TCZ001J	BAS3550T0(125-022J) BO SUNG RH
		FB401	6210TCE003J	BAS2550T BO SUNG 2550MM AXIAL5
		FB402	6210TCE003L	BAS3580T BO SUNG 3580MM AXIAL5
		FB403	6210TCE003J	BAS2550T BO SUNG 2550MM AXIAL5
		FB501	6210TCE003P	BRS2550B BO SUNG 2550MM RADIAL
		FB502	6210TCE003J	BAS2550T BO SUNG 2550MM AXIAL5
		FB701	6210TCE003L	BAS3580T BO SUNG 3580MM AXIAL5
		FB703	6210TCE003B	BRS3580B BO SUNG 3580MM RADIAL
		FB705	6210TCE003L	BAS3580T BO SUNG 3580MM AXIAL5
		FB903	6210TCE003P	BRS2550B BO SUNG 2550MM RADIAL
		FB904	6210TCE003K	BAS3550T BO SUNG 3550MM AXIAL5
		FB905	6210TCE003P	BRS2550B BO SUNG 2550MM RADIAL
		FB921	6210TCE003A	BRD3510B BO SUNG 3510MM RADIAL
		FB922	6210TCE003L	BAS3580T BO SUNG 3580MM AXIAL5
		FB951	6210TCE003J	BAS2550T BO SUNG 2550MM AXIAL5
		FB952	6210TCE003G	BRS3550B BO SUNG 3550MM RADIAL

DATE: 2002. 10. 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
TRANSISTORS				
		Q501	0TR320209AA	KTC3202-Y(KTC1959) TP KEC TO92
		Q502	0TR127009AA	KTA1270-Y(KTA562TM) TP KEC TO9
		Q503	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO92
		Q510	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO92
		Q511	0TR320509AB	KTC3205-Y(KTC2236A) TP KEC TO9
		Q512	0TR127509AC	KTA1275-Y(KTA1013) TP KEC TO92
		Q701	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO92
		Q703	0TR127009AA	KTA1270-Y(KTA562TM) TP KEC TO9
		Q704	0TR320209AA	KTC3202-Y(KTC1959) TP KEC TO92
		Q705	0TR100809AA	KSC1008C-Y TP SAMSUNG TO92 NP
		Q706	0TRFC10007A	FJAF6815 FAIRCHILD ST TO3PF 15
		Q707	0TR127009AA	KTA1270-Y(KTA562TM) TP KEC TO9
		Q708	0TR127009AA	KTA1270-Y(KTA562TM) TP KEC TO9
		Q709	0TR141300AB	KTD1413 BK KEC TO220I S NPN
		Q710	0TR440009CA	KSP44 TP SAMSUNG
		Q711	0TF630000DA	IRF630A BK SAMSUNG 200V 9A TO2
		Q712	0TF630000DA	IRF630A BK SAMSUNG 200V 9A TO2
		Q713	0TF630000DA	IRF630A BK SAMSUNG 200V 9A TO2
		Q714	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO92
		Q715	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO92
		Q716	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO92
		Q717	0TR100809AA	KSC1008C-Y TP SAMSUNG TO92 NP
		Q719	0TF630000DA	IRF630A BK SAMSUNG 200V 9A TO2
		Q799	0TR920009AB	KSP92 TP SAMSUNG TO92 HIGH VOL
		Q821	0TRFC10003A	FAIRCHILD KSD882Y-S ST TO126 4
		Q901	0TF760000AD	SSS7N60B FAIRCHILD ST TO220F 6
		Q903	0TR100809AA	KSC1008C-Y TP SAMSUNG TO92 NP
		Q941	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO92
		Q942	0TR928009AB	KSA928A-Y TP SAMSUNG TO92L PNP
		Q951	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO92
		Q952	0TR928009AB	KSA928A-Y TP SAMSUNG TO92L PNP
		Q953	0TR319809AA	KTC3198-Y(KTC1815) TP KEC TO92
RESISTORS				
		R201	0RD1001Q609	1K 1/4W(3 5% TA52
		R202	0RD0912Q609	91 OHM 1/4 W (3.4) 5% TA52
		R203	0RD2200Q609	220 1/4W(3 5% TA52
		R204	0RD4300Q609	430 OHM 1/4 W(3.4) 5.00% TA52
		R205	0RD1001Q609	1K 1/4W(3 5% TA52
		R206	0RD0912Q609	91 OHM 1/4 W (3.4) 5% TA52
		R207	0RD4300Q609	430 OHM 1/4 W(3.4) 5.00% TA52
		R208	0RD2200Q609	220 1/4W(3 5% TA52
		R209	0RD9100Q609	910 1/4W(3 5% TA52
		R210	0RD2200Q609	220 1/4W(3 5% TA52
		R211	0RD2200Q609	220 1/4W(3 5% TA52
		R301	0RD0752Q609	75 1/4W(3 5% TA52
		R302	0RD0752Q609	75 1/4W(3 5% TA52
		R303	0RD0752Q609	75 1/4W(3 5% TA52
		R304	0RD3001Q609	3K 1/4W(3 5% TA52
		R305	0RD1001Q609	1K 1/4W(3 5% TA52
		R307	0RD1001Q609	1K 1/4W(3 5% TA52
		R309	0RN6201F409	6.20K 1/6W 1% TA52
		R311	0RD0271Q609	2.70 1/4W(3 5% TA52
		R312	0RD2001Q609	2K 1/4W(3 5% TA52

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R313	ORD1000Q609	100 1/4W(3 5% TA52
		R314	ORD6800Q609	680 1/4W(3 5% TA52
		R317	ORD2001Q609	2K 1/4W(3 5% TA52
		R319	ORD1000Q609	100 1/4W(3 5% TA52
		R320	ORD1000Q609	100 1/4W(3 5% TA52
		R321	ORD0152Q609	15 1/4W(3 5% TA52
		R322	ORD0152Q609	15 1/4W(3 5% TA52
		R323	ORD0152Q609	15 1/4W(3 5% TA52
		R324	ORD3300Q609	330 1/4W(3 5% TA52
		R325	ORD3300Q609	330 1/4W(3 5% TA52
		R326	ORD3300Q609	330 1/4W(3 5% TA52
		R327	ORD3300Q609	330 1/4W(3 5% TA52
		R331	ORD0512Q609	51 1/4W(3 5% TA52
		R332	ORD0512Q609	51 1/4W(3 5% TA52
		R333	ORD0512Q609	51 1/4W(3 5% TA52
		R335	ORD0271Q609	2.70 1/4W(3 5% TA52
		R336	ORD1000Q609	100 1/4W(3 5% TA52
		R337	ORD1000Q609	100 1/4W(3 5% TA52
		R341	ORD2000Q609	200 1/4W(3 5% TA52
		R342	ORD2000Q609	200 1/4W(3 5% TA52
		R343	ORD2000Q609	200 1/4W(3 5% TA52
		R344	ORD1000Q609	100 1/4W(3 5% TA52
		R351	ORD2200A609	220 OHM 1/2 W (7.0) 5% TA52
		R352	ORD2200A609	220 OHM 1/2 W (7.0) 5% TA52
		R353	ORD2200A609	220 OHM 1/2 W (7.0) 5% TA52
		R354	ORD0392A609	39 OHM 1/2 W (7.0) 5% TA52
		R382	ORD1000Q609	100 1/4W(3 5% TA52
		R383	ORD1000Q609	100 1/4W(3 5% TA52
		R401	ORD1000Q609	100 1/4W(3 5% TA52
		R402	ORD5600Q609	560 1/4W(3 5% TA52
		R404	ORD3002Q609	30K 1/4W(3 5% TA52
		R405	ORD2001Q609	2K 1/4W(3 5% TA52
		R406	ORD2001Q609	2K 1/4W(3 5% TA52
		R407	ORD1300Q609	130 1/4W(3 5% TA52
		R408	ORD1300Q609	130 1/4W(3 5% TA52
		R409	ORD1000Q609	100 1/4W(3 5% TA52
		R410	ORD1000Q609	100 1/4W(3 5% TA52
		R412	ORD1004Q609	1M OHM 1/4 W (3.4) 5% TA52
		R414	ORD4701Q609	4.70K 1/4W(3 5% TA52
		R417	ORD1000Q609	100 1/4W(3 5% TA52
		R418	ORD1002Q609	10K 1/4W(3 5% TA52
		R419	ORD1004Q609	1M OHM 1/4 W (3.4) 5% TA52
		R424	ORD2200Q609	220 1/4W(3 5% TA52
		R425	ORD4701Q609	4.70K 1/4W(3 5% TA52
		R426	ORD4701Q609	4.70K 1/4W(3 5% TA52
		R429	ORD1000Q609	100 1/4W(3 5% TA52
		R430	ORD1000Q609	100 1/4W(3 5% TA52
		R431	ORD4701Q609	4.70K 1/4W(3 5% TA52
		R432	ORD1000Q609	100 1/4W(3 5% TA52
		R433	ORD1000Q609	100 1/4W(3 5% TA52
		R434	ORD1000Q609	100 1/4W(3 5% TA52
		R438	ORD1001Q609	1K 1/4W(3 5% TA52
		R439	ORD1001Q609	1K 1/4W(3 5% TA52
		R444	ORD1002Q609	10K 1/4W(3 5% TA52
		R445	ORD5101Q609	5.10K 1/4W(3 5% TA52
		R446	ORD1002Q609	10K 1/4W(3 5% TA52

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R447	ORD1001Q609	1K 1/4W(3 5% TA52
		R448	ORD1801Q609	1.80K 1/4W(3 5% TA52
		R501	ORD0102A609	10 OHM 1/2 W (7.0) 5% TA52
		R508	ORD4702Q609	47K 1/4W(3 5% TA52
		R509	ORD1502Q609	15K 1/4W(3 5% TA52
		R510	ORD4702Q609	47K 1/4W(3 5% TA52
		R511	ORD3902Q609	39K 1/4W(3 5% TA52
		R512	ORD5601Q609	5.60K 1/4W(3 5% TA52
		R513	ORD0472A609	47 OHM 1/2 W (7.0) 5% TA52
		R514	ORD0101A609	1 OHM 1/2 W (7.0) 5% TA52
		R515	ORD1502Q609	15K 1/4W(3 5% TA52
		R597	ORD3902Q609	39K 1/4W(3 5% TA52
		R598	ORD5601Q609	5.60K 1/4W(3 5% TA52
		R599	ORD0202A609	20 OHM 1/2 W (7.0) 5% TA52
		R602	ORN1300F409	130 1/6W 1% TA52
		R604	ORN2001F409	2K 1/6W 1% TA52
		R607	ORN5101F409	5.10K 1/6W 1% TA52
		R608	ORN2002F409	20K 1/6W 1% TA52
		R609	ORN1102F409	11K 1/6W 1% TA52
		R611	ORD0151A609	1.5 OHM 1/2 W (7.0) 5% TA52
		R612	ORD2700A609	270 OHM 1/2 W (7.0) 5% TA52
		R614	ORD0101A609	1 OHM 1/2 W (7.0) 5% TA52
		R615	ORN1202F409	12K 1/6W 1% TA52
		R619	ORN2001F409	2K 1/6W 1% TA52
		R700	971-0016	TIN HDC 0.60H
		R701	ORN6201F409	6.20K 1/6W 1% TA52
		R702	ORD2001Q609	2K 1/4W(3 5% TA52
		R703	ORD1001Q609	1K 1/4W(3 5% TA52
		R704	ORD4302Q609	43K 1/4W(3 5% TA52
		R705	ORD3902Q609	39K 1/4W(3 5% TA52
		R706	ORD1002Q609	10K 1/4W(3 5% TA52
		R707	ORD1001Q609	1K 1/4W(3 5% TA52
		R708	ORD1102Q609	11K 1/4W(3 5% TA52
		R709	ORN1002F409	10K 1/6W 1 TA52
		R710	ORD1000Q609	100 1/4W(3 5% TA52
		R711	ORD1000Q609	100 1/4W(3 5% TA52
		R712	ORD1501Q609	1.50K 1/4W(3 5% TA52
		R713	ORN8202F409	82K 1/6W 1% TA52
		R714	ORN1102F409	11K 1/6W 1% TA52
		R715	ORD1004Q609	1M OHM 1/4 W (3.4) 5% TA52
		R716	ORD1002Q609	10K 1/4W(3 5% TA52
		R717	ORD2701Q609	2.70K 1/4W(3 5% TA52
		R718	ORD0242Q609	24 1/4W(3 5% TA52
		R719	ORN1001F409	1K 1/6W 1% TA52
		R720	ORD1803Q609	180K 1/4W(3 5% TA52
		R721	971-0016	TIN HDC 0.60H
		R722	ORD1001Q609	1K 1/4W(3 5% TA52
		R723	ORD1001Q609	1K 1/4W(3 5% TA52
		R724	ORD1001Q609	1K 1/4W(3 5% TA52
		R726	ORD7502A609	75K OHM 1/2 W (7.0) 5% TA52
		R727-1	0RX0242K665	24 OHM 2 W 5% SF
		R728	ORD1001Q609	1K 1/4W(3 5% TA52
		R729	ORD1002Q609	10K 1/4W(3 5% TA52
		R731	ORD1002Q609	10K 1/4W(3 5% TA52
		R732	ORD5102Q509	51K OHM 1/4 W (3.4) 2% TA52
		R733	971-0016	TIN HDC 0.60H

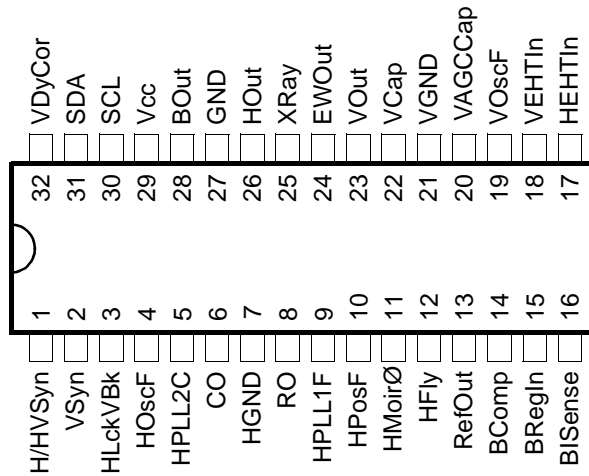
DATE: 2002. 10. 10.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R735	ORD1002Q609	10K 1/4W(3 5% TA52
		R736	0RX2201J609	2.2KOHM 1 W 5% TA52
		R737	0RN0560H609	0.56 1/2W 5 TA52
		R738	0RN0560H609	0.56 1/2W 5 TA52
		R739	ORD1503Q609	150K 1/4W(3 5% TA52
		R740	ORD0271A609	2.7 OHM 1/2 W (7.0) 5% TA52
		R741	ORD1000Q609	100 1/4W(3 5% TA52
		R742	ORD3601Q609	3.60K 1/4W(3 5% TA52
		R743	ORD4701Q609	4.70K 1/4W(3 5% TA52
		R744	0RX2200K607	220 OHM 2 W 5% TA62
		R745	ORD4702Q609	47K 1/4W(3 5% TA52
		R746	ORD2201Q609	2.20K 1/4W(3 5% TA52
		R747	ORD3001Q609	3K 1/4W(3 5% TA52
		R748	ORD4702Q609	47K 1/4W(3 5% TA52
		R749	ORD2201Q609	2.20K 1/4W(3 5% TA52
		R750	ORD3001Q609	3K 1/4W(3 5% TA52
		R751	0RN2001F409	2K 1/6W 1% TA52
		R752	ORD2201Q609	2.20K 1/4W(3 5% TA52
		R753	ORD3001Q609	3K 1/4W(3 5% TA52
		R754	ORD1002Q609	10K 1/4W(3 5% TA52
		R755	ORD3301Q609	3.30K 1/4W(3 5% TA52
		R756	ORD2202A609	22K OHM 1/2 W (7.0) 5% TA52
		R757	ORD1003Q609	100K 1/4W(3 5% TA52
		R758	0RN1303F409	130K 1/6W 1% TA52
		R759	ORD1302Q509	13K OHM 1/4 W (3.4) 2% TA52
		R760	ORD5103Q609	510K 1/4W(3 5% TA52
		R761	ORD3001Q609	3K 1/4W(3 5% TA52
		R762	ORD3001Q609	3K 1/4W(3 5% TA52
		R763	ORD3001Q609	3K 1/4W(3 5% TA52
		R764	971-0016	TIN HDC 0.60H
		R765	ORD3000A609	300 OHM 1/2 W (7.0) 5% TA52
		R766	ORD6200A609	620 OHM 1/2 W(7.0) 5.00% TA52
		R767	971-0016	TIN HDC 0.60H
		R768	ORD5103A609	510K OHM 1/2 W (7.0) 5% TA52
		R769	0RN1001F409	1K 1/6W 1% TA52
		R771	0RN2001F409	2K 1/6W 1% TA52
		R772	0RN2401F409	2.40K 1/6W 1% TA52
		R773	ORD6202A609	62K OHM 1/2 W (7.0) 5% TA52
		R779	ORD3601Q509	3.6K OHM 1/4 W(3.4) 2% TA52
		R782	ORD3301A609	3.3K OHM 1/2 W(7.0) 5.00% TA52
		R783	971-0016	TIN HDC 0.60H
		R784	ORD1000Q609	100 1/4W(3 5% TA52
		R786	ORD4302Q609	43K 1/4W(3 5% TA52
		R790	ORD1002Q609	10K 1/4W(3 5% TA52
		R793	ORD4702Q609	47K 1/4W(3 5% TA52
		R797	ORD1501Q609	1.50K 1/4W(3 5% TA52
		R798	ORD2001Q609	2K 1/4W(3 5% TA52
		R799	ORD1502Q609	15K 1/4W(3 5% TA52
		R801	ORD4702Q609	47K 1/4W(3 5% TA52
		R802	ORD1502Q609	15K 1/4W(3 5% TA52
		R803	ORD2001Q609	2K 1/4W(3 5% TA52
		R804	971-0016	TIN HDC 0.60H
		R808	ORD6802Q609	68K 1/4W(3 5% TA52
		R809	0RX0101K665	1 OHM 2 W 5% SF
		R813	ORD6802Q609	68K 1/4W(3 5% TA52
		R814	ORD1202Q609	12K 1/4W(3 5% TA52

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R816	0RN3001F409	3K 1/6W 1% TA52
		R818	0RN6202F409	62KOHM 1/6 W 1% TA52
		R821	0RD3001Q609	3K 1/4W(3 5% TA52
		R822	0RX0152J609	15 OHM 1 W 5% TA52
		R823	0RX0432K665	430OHM 2 W 5% SF
		R824	0RD2400A609	240 OHM 1/2 W (7.0) 5% TA52
		R901	0RD4703A609	470K OHM 1/2 W (7.0) 5% TA52
		R902	0RD0511Q609	5.1 OHM 1/4 W (3.4) 5% TA52
		R904	0RX3902K665	39K OHM 2 W 5% SF
		R906	0RD6200Q609	620 1/4W(3 5% TA52
		R908	0RN0220H609	0.22 1/2W 5% TA52
		R910	0RX4702J609	47K OHM 1 W 5% TA52
		R911	0RD0202Q609	20 1/4W(3 5% TA52
		R912	0RD1802Q609	18K 1/4W(3 5% TA52
		R913	0RD2201Q609	2.20K 1/4W(3 5% TA52
		R915	0RD0102Q609	10 1/4W(3 5% TA52
		R916	0RD1002Q609	10K 1/4W(3 5% TA52
		R918	0RD1001Q609	1K 1/4W(3 5% TA52
		R923	0RD1003Q609	100K 1/4W(3 5% TA52
		R925	0RB0180K607	0.18OHM 2 W 5% TA62
		R926	0RD4301Q609	4.30K 1/4W(3 5% TA52
		R927	0RD2002Q609	20K 1/4W(3 5% TA52
		R928	0RD1800Q609	180 1/4W(3 5% TA52
		R929	0RD0332Q609	33 1/4W(3 5% TA52
		R941	0RN0220H609	0.22 1/2W 5% TA52
		R944	0RD4700A609	470 OHM 1/2 W (7.0) 5% TA52
		R945	0RD4701Q609	4.70K 1/4W(3 5% TA52
		R951	0RN0221H609	2.2 1/2W 5 TA52
		R952	0RD1202A609	12K OHM 1/2 W(7.0) 5.00% TA52
		R953	0RD1001A609	1K OHM 1/2 W (7.0) 5% TA52
		R954	0RD4701Q609	4.70K 1/4W(3 5% TA52
		R955	0RD4701Q609	4.70K 1/4W(3 5% TA52
		R956	0RD6802A609	68K OHM 1/2 W (7.0) 5% TA52
		R957	0RD0472A609	47 OHM 1/2 W (7.0) 5% TA52
		R960	0RD6200A609	620 OHM 1/2 W(7.0) 5.00% TA52
OTHERs				
		F901	0FZZTTH001B	TIME LAG HBC 5A/250V,215 005,L
		J302	0RD0471Q609	4.70 1/4W(3 5% TA52
		J47	0RD1001Q609	1K 1/4W(3 5% TA52
		RL901	6920TBB005A	ALA2PF12 MATSUSHITA 250V 5A 12
		RL901	6920TBB005A	ALA2PF12 MATSUSHITA 250V 5A 12
		SC301	6620TBD003A	PCS701E PARK ELEC. 10PIN 14/36
		SC901	6620TKB002A	BAE EUN AC UNIVERSAL 3PIN BLAC
		SG301	6918TAT005E	MTAS-201M GIGA AXIAL TAPING
		SG302	6918TAT005E	MTAS-201M GIGA AXIAL TAPING
		SG303	6918TAT005E	MTAS-201M GIGA AXIAL TAPING
		SG305	6918TRT005A	SSG-102-A0,1KV SMART RADIAL TA
		SG701	6918TRT005A	SSG-102-A0,1KV SMART RADIAL TA
		SW201	140-058D	SKHV10911A LGEC NON 12 20 HORI
		SW202	140-058D	SKHV10911A LGEC NON 12 20 HORI
		SW203	140-058D	SKHV10911A LGEC NON 12 20 HORI
		SW204	140-058D	SKHV10911A LGEC NON 12 20 HORI
		SW205	140-058D	SKHV10911A LGEC NON 12 20 HORI
		SW206	140-058D	SKHV10911A LGEC NON 12 20 HORI

PIN CONFIGURATION

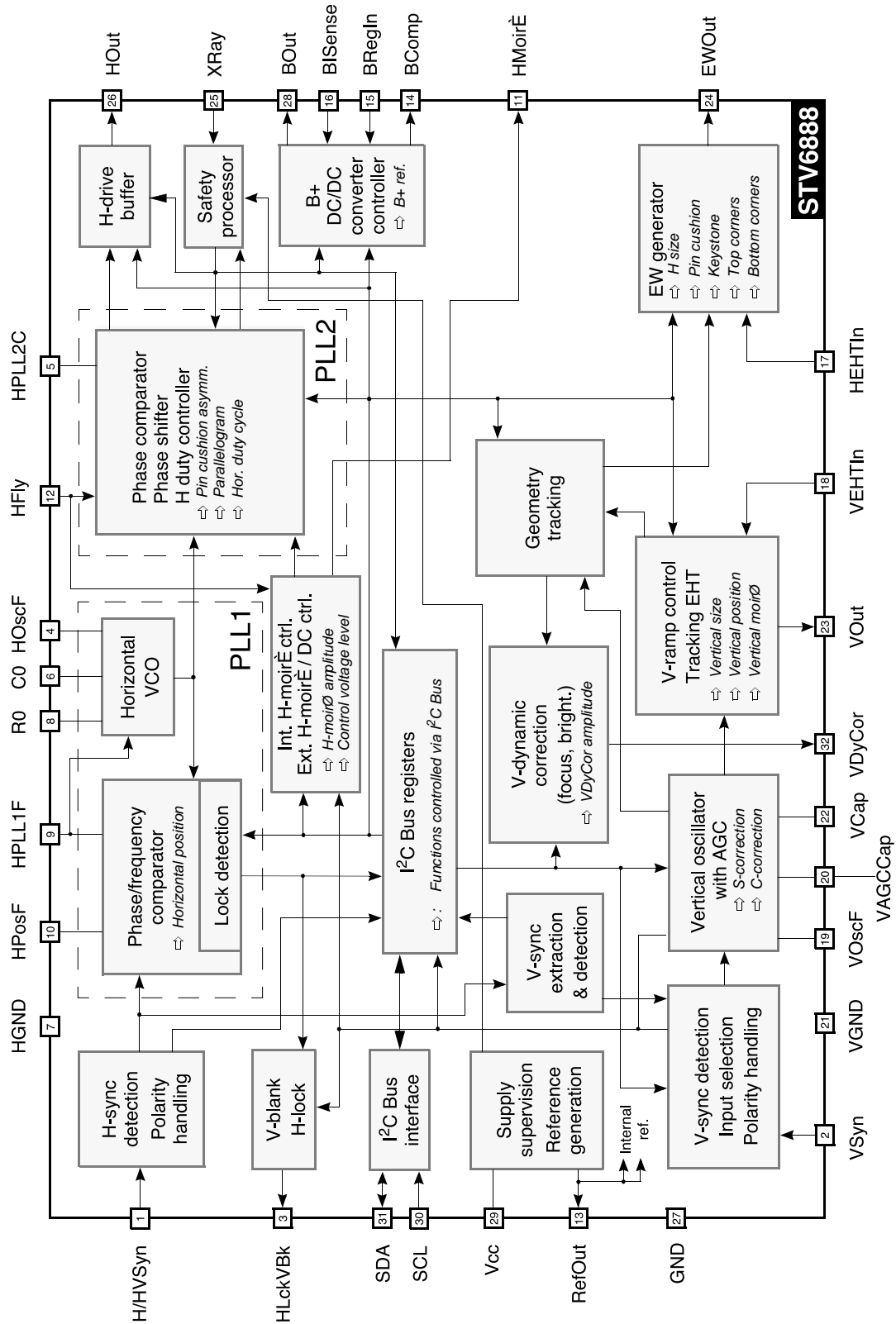
LOW-COST I²C CONTROLLED DEFLECTION PROCESSOR FOR MULTISYNC MONITORS

STV6888




Pin	Name	Function
1	H/HVSyn	TTL compatible H orizontal / H orizontal and V ertical S ync. input
2	VSyn	TTL compatible V ertical S ync. input
3	HLckVBk	H orizontal PLL1 L ock detection and V ertical early B lanking composite output
4	HOscF	High H orizontal O scillator sawtooth threshold level F ilter input
5	HPLL2C	H orizontal P LL2 loop C apacitive filter input
6	CO	Horizontal O scillator C apacitor input
7	HGND	H orizontal section G rou N D
8	RO	Horizontal O scillator R esistor input
9	HPLL1F	H orizontal P LL1 loop F ilter input
10	HPosF	H orizontal P osition F ilter and soft-start time constant capacitor input
11	HMoirE	H orizontal M oirE output
12	HFly	H orizontal F lyback input
13	RefOut	R eference voltage O utput
14	BComp	B + DC/DC error amplifier (C omparator) output
15	BRegIn	R egulation feedback I nput of the B + DC/DC converter controller
16	BISense	B + DC/DC converter current (I) S ense input
17	HEHTIn	I nput for compensation of H orizontal amplitude versus E HT variation
18	VEHTIn	I nput for compensation of V ertical amplitude versus E HT variation
19	VOscF	V ertical O scillator sawtooth low threshold F ilter (capacitor to be connected to VGND)
20	VAGCCap	Input for storage C apacitor for A utomatic G ain C ontrol loop in V ertical oscillator
21	VGND	V ertical section G rou N D
22	VCap	V ertical sawtooth generator C apacitor
23	VOut	V ertical deflection drive O utput for a DC-coupled output stage
24	EWOut	E /W O utput
25	XRay	X - R ay protection input
26	HOut	H orizontal drive O utput
27	GND	Main G rou N D
28	BOut	B + DC/DC converter controller O utput
29	Vcc	Supply voltage
30	SCL	I ² C bus S erial C Lock Input
31	SDA	I ² C bus S erial D Ata input/output
32	VDyCor	V ertical D ynamic C orrection output

Block Diagram



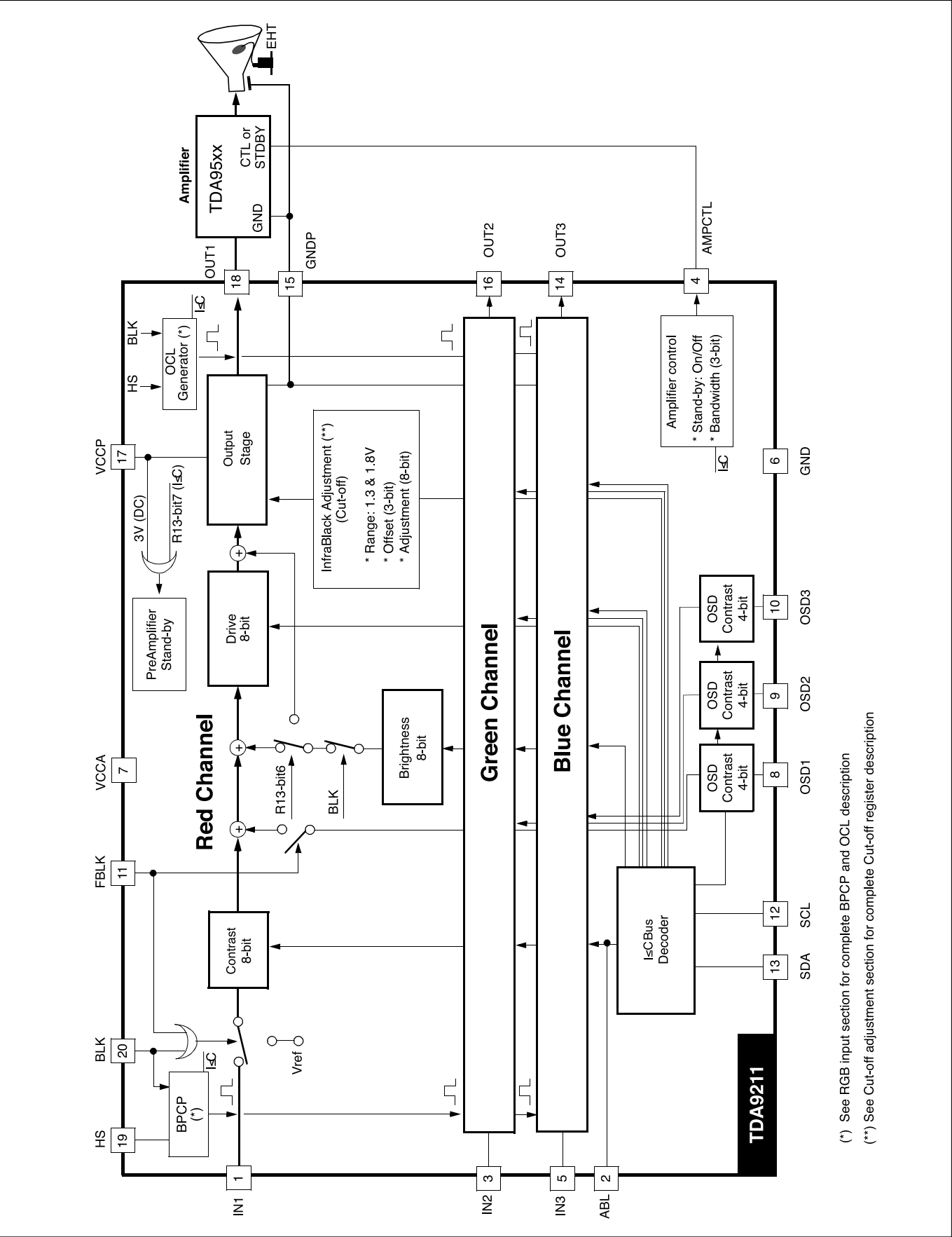
STV9211

Pin Configuration

IN1	<input type="checkbox"/>	1		20	<input type="checkbox"/>	BLK
ABL	<input type="checkbox"/>	2		19	<input type="checkbox"/>	HS
IN2	<input type="checkbox"/>	3		18	<input type="checkbox"/>	OUT1
AMPCTL	<input type="checkbox"/>	4		17	<input type="checkbox"/>	V _{CCP}
IN3	<input type="checkbox"/>	5		16	<input type="checkbox"/>	OUT2
GNDA	<input type="checkbox"/>	6		15	<input type="checkbox"/>	GNDP
V _{CCA}	<input type="checkbox"/>	7		14	<input type="checkbox"/>	OUT3
OSD1	<input type="checkbox"/>	8		13	<input type="checkbox"/>	SDA
OSD2	<input type="checkbox"/>	9		12	<input type="checkbox"/>	SCL
OSD3	<input type="checkbox"/>	10		11	<input type="checkbox"/>	FBLK

Pin Description

Pin number	symbol	description
1	IN1	Video input (channel 1, red)
2	ABL	ABL input
3	IN2	Video input (channel 2, green)
4	AMPCTL	Amplifier control (bandwidth and stand-by). Only applicable with amplifiers with the CTL or STDBY pins. To be connected to ground if not used.
5	IN3	Video input (channel 3, blue)
6	GNDA	Analog ground
7	V _{CCA}	Analog supply (5V)
8	OSD1	OSD input (channel 1, red)
9	OSD2	OSD input (channel 2, green)
10	OSD3	OSD input (channel 3, blue)
11	FBLK	Fast blanking
12	SCL	SCL
13	SDA	SDA
14	OUT3	Video output (channel 3, blue)
15	GNDP	Power ground
16	OUT2	Video output (channel 2, green)
17	V _{CCP}	Output stage supply (5 V to 8 V)
18	OUT1	Video output (channel 1, red)
19	HS	Horizontal synchro or BPCP pulse
20	BLK	Blanking input

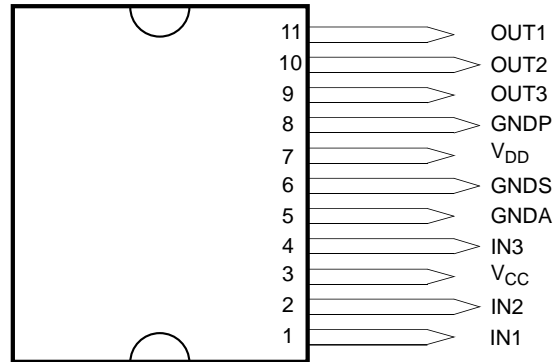


(*) See RGB input section for complete BPCP and OCL description

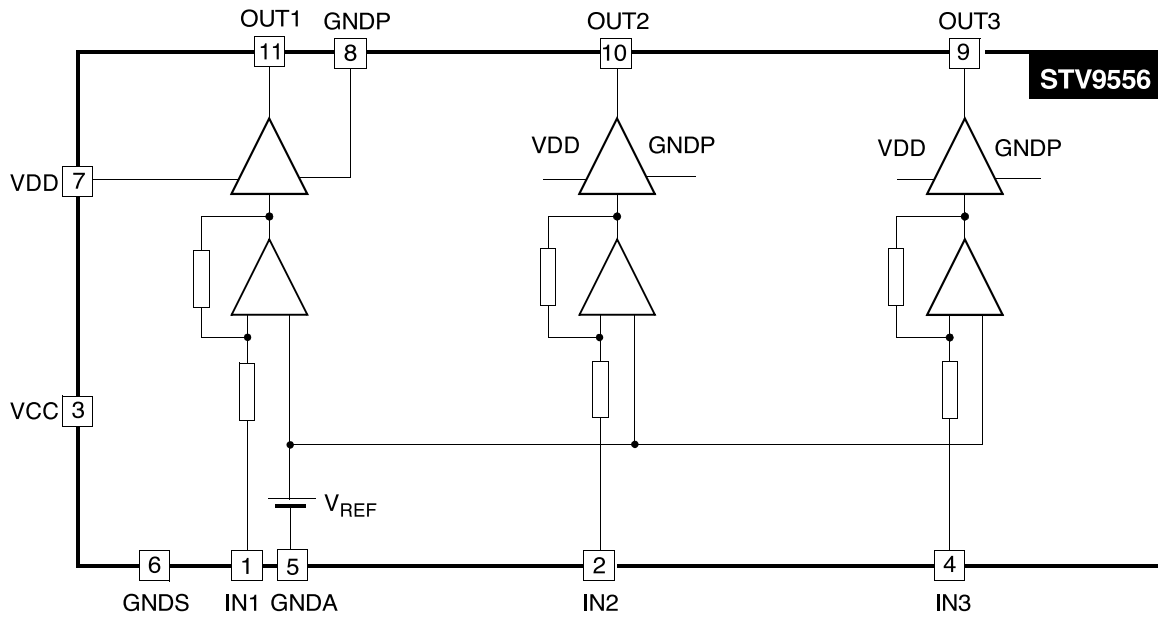
(**) See Cut-off adjustment section for complete Cut-off register description

STV9556

Pin Configuration

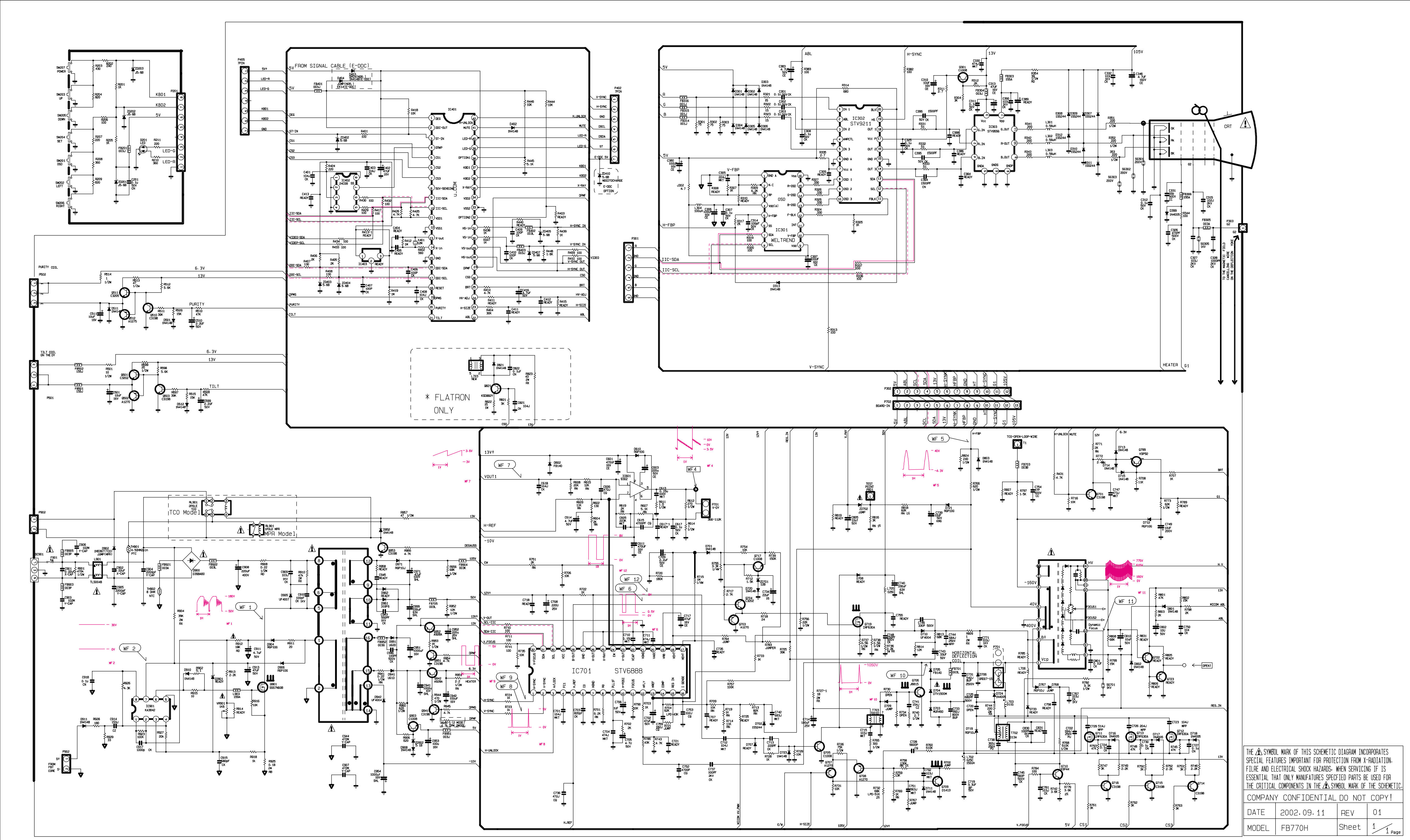


BLOCK DIAGRAM



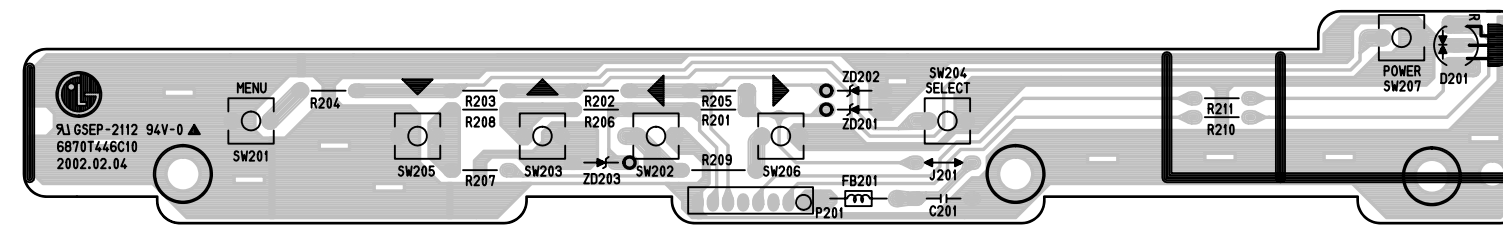
SCHEMATIC DIAGRAM

NOTICE
Since this is a basic schematic diagram.
The value of components and some partial connection are
subject to be changed for improvement without notice.

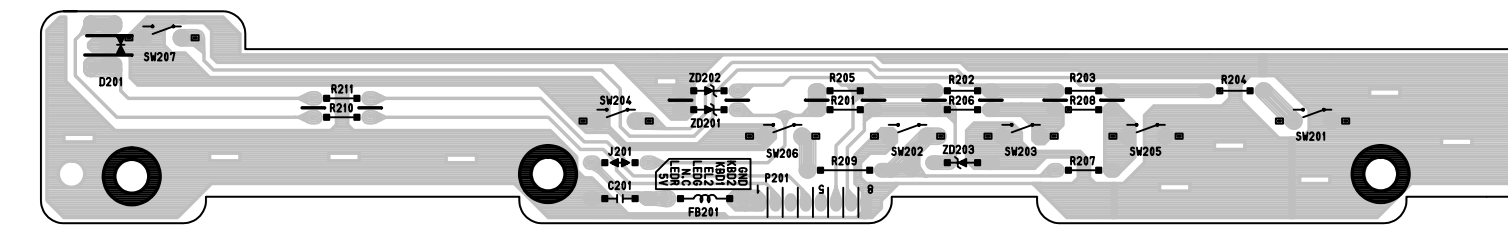


PRINTED CIRCUIT BOARD

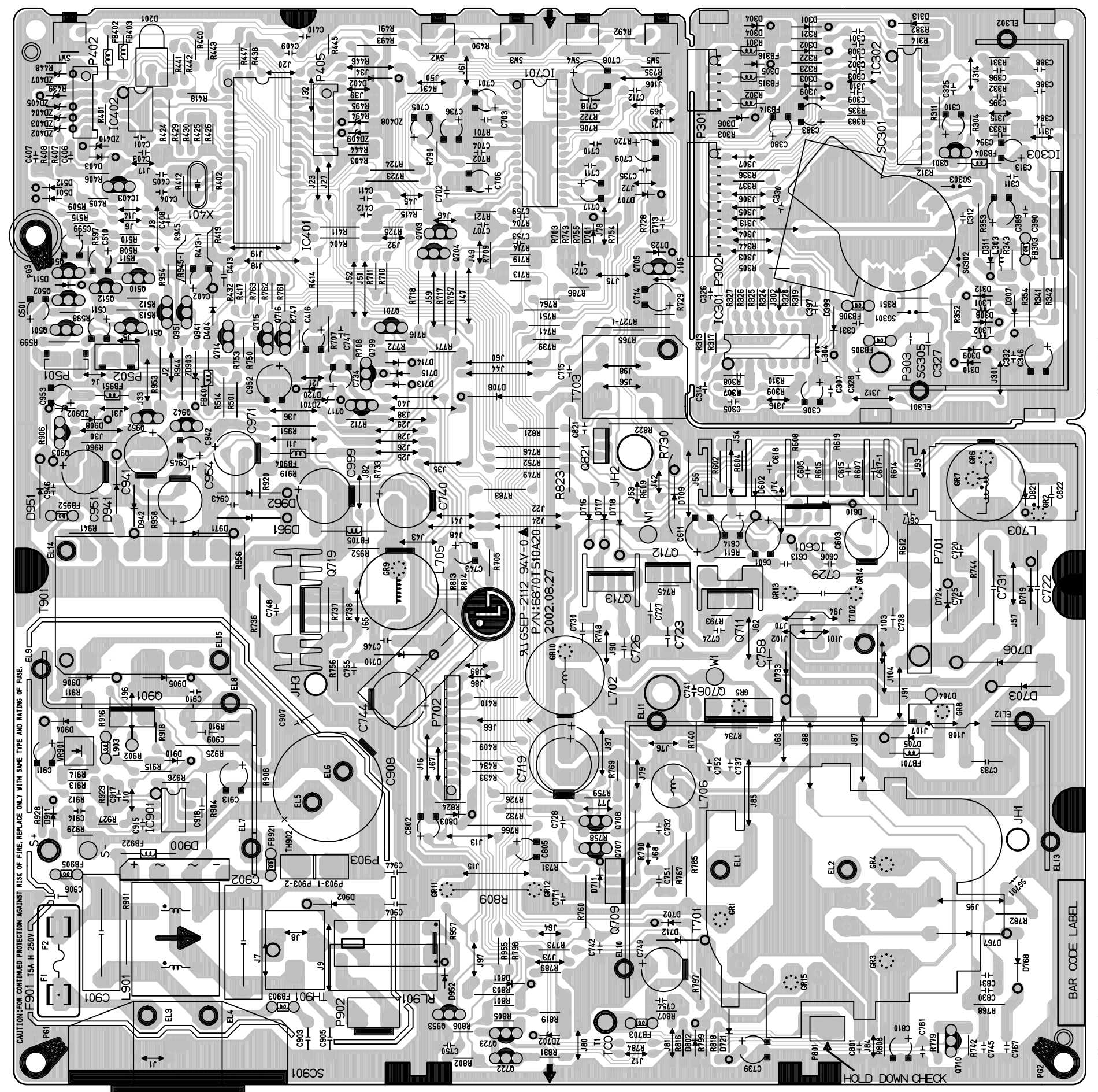
1. CONTROL BOARD (Component Side)



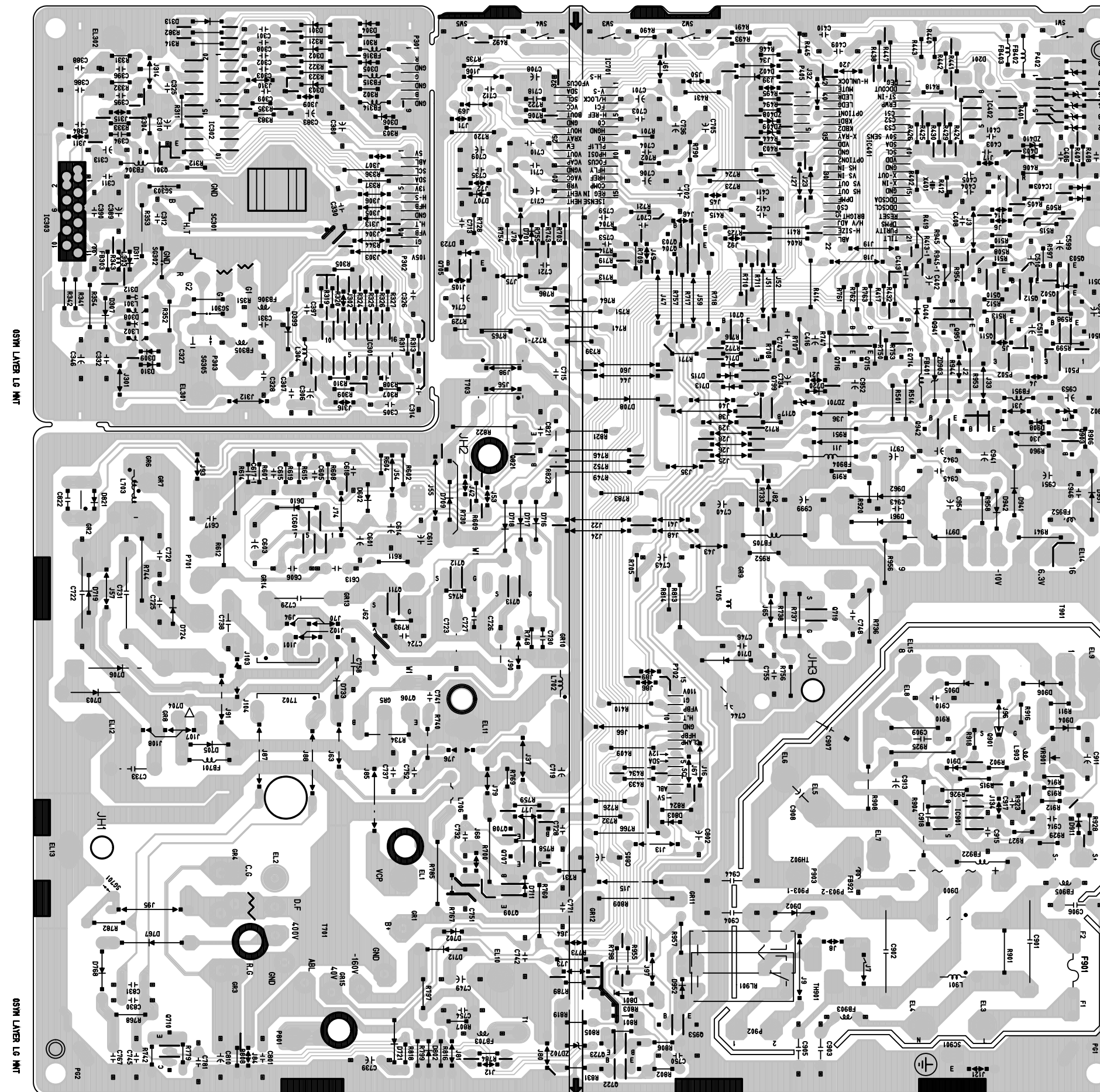
2. CONTROL BOARD (Solder Side)



3. MAIN BOARD (Component Side)



4. MAIN BOARD (Solder Side)





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